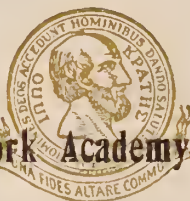




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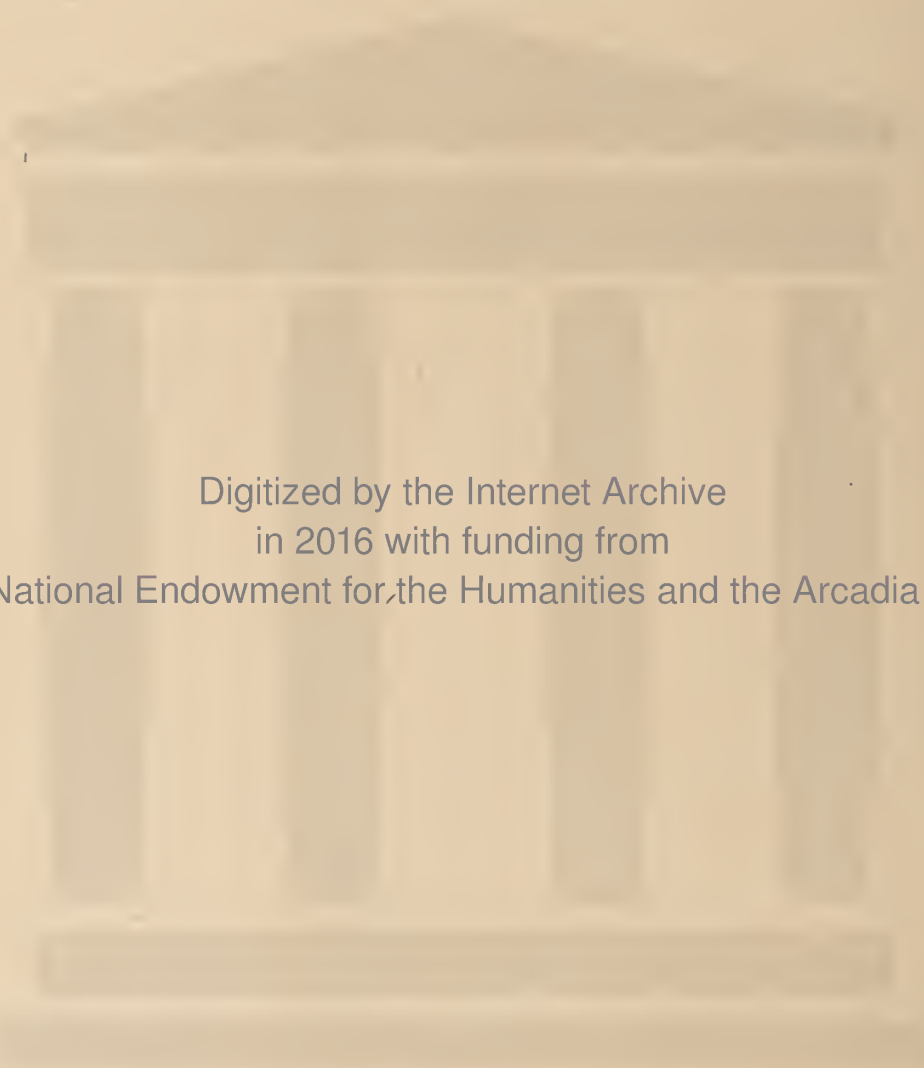
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# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY THE  
OHIO STATE MEDICAL ASSOCIATION UNDER THE  
DIRECTION OF THE PUBLICATION COMMITTEE

JAN. 1, 1920 VOL. XVI  
No. : : 1



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
mailing at special rate of postage provided  
for in Section 1103, Act of Oct. 3, 1917,  
Authorized July 10, 1918.

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# Ohio State Medical Journal

Published monthly by

THE OHIO STATE MEDICAL ASSOCIATION

181 East State Street, Columbus, Ohio

Telephones: Ohio State 4905; Bell Main 5259

This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.

Issued under the direction of the Publication Committee.

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**Next Meeting of the State Association,  
Toledo, 1920**

## EDITORIAL COMMENT

by D. K. M.

## YOUR MEMBERSHIP

As the pages of this issue closed the Columbus office was busily engaged in the work of receipting remittances for 1920 dues from secretary-treasurers of the component county societies, and in mailing out individual membership cards to the paid-up members.

While collections at this time were slightly below those recorded at similar periods during the past two years we were optimistic enough to predict that the majority of our 4,707 members of 1919 would be in good standing on January 1. It is certain that the 1919 membership will not only be equalled, but will eventually be surpassed by a good margin during 1920. But there's the rub—that word "eventually" should be taken out of the dictionary. Immediate action is necessary if the Association is to accomplish its maximum of good during the coming year.

More than a third of the societies had made substantial remittances, several had qualified as one hundred per cent., and advices from others indicates that every effort is being made to complete collections by the end of December. If you have overlooked this matter, please forward your check to your secretary at once, as your membership automatically lapsed at midnight on December 31. Until your dues are paid and the money is received here, you are without the medical defense protection offered by the Association, and if the same are not received this month, this will be your last issue of *The Journal*.

The importance of retaining your medical defense protection at this time cannot be too strongly emphasized. For a while it seemed that these actions were on the decrease in Ohio but recently the wide-spread unrest seems to have inspired in the unscrupulous a wily plan to secure money through this method. Nearly every day the Committee on Medical Defense is requested to take quick action in some suit or threatened suit. If an attempt should be made to make you the victim of such an attack in the interim between January 1 and the date on which your dues were received, the committee would be forced to withhold the Association's protection. Can you afford to forfeit this?

Certainly not. Neither do you wish to be deprived of the many other facilities offered by the Association. If you haven't already remitted to your county secretary *Today* is the time to do so—\$5.00 for the state dues plus the amount of your county assessment.

May 1920 be the best, the happiest and most successful for you and the profession!



### Social Medicine Experiment

Because of the series of difficulties in which the medical profession of Great Britain has found itself during the past several years under state medicine, and health insurance, the following article from a recent issue of *The Journal of the American Medical Association* is particularly interesting:

"In England, the medical profession and the public are apparently in a state of readjustment. Social insurance in the four years preceding the war, the needs and emergencies of war times, and the discussion of the last year culminating in the creation of a national health ministry, all have combined to arouse and concentrate interest and discussion on the improvement of medical services. An experiment now being carried on in Glasgow is, therefore, of special interest. Dr. David McKail, lecturer on public health at St. Mungo's College, and Mr. William Jones, clerk and treasurer of the Glasgow Insurance Committee, have worked out a plan for a public medical service as a substitute for the social insurance scheme now in operation. Beginning with a criticism of social insurance, which they condemn for failure to provide any form of institutional treatment and for furnishing medical services to only about one-third of the total population, they propose to build up a complete medical service, furnishing unrestricted treatment to every citizen needing it, and involving the enrollment of the medical profession and the public control of all general hospitals and infirmaries.

"The proposed plan is founded on the experience gained in efforts to meet war conditions, when for a time dispensaries were established in Glasgow for centralizing the patients of absent physicians. The city was divided into districts, and a consultation center established in each. The Bridgetown District, with approximately 100,000 inhabitants, is taken as a convenient unit for study. The volume of sickness as shown by the number of dispensary visits is found to be 3.11 per person per year, varying from a maximum of 7.5 visits for the first year of life to a minimum of 1.32 for ages from 15 to 25. House visits are found to amount to one fourth of dispensary visits. This amount of professional work would require twenty-seven physicians, working thirty-three hours a week. A 25 per cent. addition for seasonal increases would necessitate a staff of thirty-three physicians, each of whom would have an annual vacation in the summer or fall. Births would average nine or ten a day, requiring four obstetricians. Minor surgery and various specialties would require six, making a total staff of forty-three medical men, exclusive of institutional and consultant service. These men are to be graded in three classes, according to age, experience, etc. Each junior would be allowed time and be required to do graduate medical work and special study with a view to his advancement in the service. Salaries would range from \$1,500 to \$2,000 for juniors, \$2,500 to \$3,500 for middle grades, and \$4,000 to \$4,500

for seniors. Provision is also made for dentists and for dental treatment. It is estimated that the expenses of such a medical service could be defrayed by a tax of 1s. 10d. in the pound, imposed in the same manner as the public health assessment, and that the entire expenses of operation could be supplied at an individual cost below the seven shillings capitation basis on which social insurance is now being conducted.

"An interesting side light is thrown on the provision for free choice of physicians, under the social insurance plan now in operation. A careful study of the district shows that since the introduction of social insurance and the panel system in Glasgow, those affected have not made an effort to exercise any choice in the selection of physicians, but have gone to the nearest and most conveniently located physician. The advantages for the physician of the proposed public medical service are the limitation of working hours, the guaranteed adequate income, the avoidance of waste of time and energy, the opportunity for increased income, the accumulation of experience, and the opportunity for graduate and special work for every practicing physician. The advantages claimed for the individual are better treatment at a much less expense and for the community, economy of administration, and the prevention of a large amount of disease. The *London Lancet* in commenting on the proposed plan, expresses the hope that the author may have an opportunity of testing it, as success or failure would alike afford much needed experience." \* \* \*

A recent decision from London shows that the situation on the matter of adequate compensation for medical service has become so acute that the ministry of health recognizes that relief must be granted in the form of increased fee schedules.

British physicians have long been complaining that, as nearly everything has advanced in price owing to the war, there should be a proportionate advance in their fees. The justice of this contention has been officially recognized by the minister of health. Being of opinion, he states, that the present minimum fees of 60 cents and 84 cents for primary vaccinations at private houses are inadequate he has issued an order, which became effective in December, to increase the minimum fee to \$1.25.

### Well Done

As this issue went to press we learned of the resignation of Dr. John E. Monger of Greenville as registrar of the State Bureau of Vital Statistics, and the appointment of Dr. U. G. Murrell of Wilmington, former state senator from the fifty-sixth senatorial district, as his successor. During Dr. Monger's administration Ohio, by reason of the completeness of its birth registration, was included in the national registration area for the first time, and the efficiency of his department has attracted international recognition.

## Legislative Developments as They Affect Medical Practice in Ohio

In the rush of legislative activities during the adjourned session of the state legislature which began on December 1 problems have developed more rapidly than during the ordinary course of legislation in a regular session. The greatest amount of activity in which the medical profession is interested has centered about the efforts to repeal or modify the Hughes public health code which was to have gone into effect the first of January.

Aggravating the situation with respect to opposition against the financial and budget features of the new health code, a decision rendered by the supreme court the middle of December directly invalidated the fundamental features of the Hughes act on the classification of cities, thereby established as municipal health districts. This decision in itself, therefore, required a complete redrafting of the law.

### PUBLIC HEALTH LEGISLATION

It will be remembered that the Hughes act was to leave the larger cities as independent health districts and to combine the smaller cities and the townships and villages of the respective counties into general health districts large enough to support full-time health organizations. Under the supreme court decision no such distinction can be made as between large and small cities and the substitute enactment must make every city, large or small, a separate health district, and combine the townships and villages into a general district. Many of these units will be so small that they cannot afford to maintain the full-time minimum organization required by the Hughes law. It will be necessary, therefore, to permit these smaller districts to employ health commissioners and other persons on a part-time basis.

Making the necessary changes in this respect, the Griswold bill (H. B. 633), introduced on Dec. 11, was passed by both the House and Senate and at this time awaits the governor's signature as an emergency bill. This substitute bill was drafted by a committee representing the rural contingent in the House of Representatives, after conference with State Health Commissioner Freeman and Representative Hughes, the author of the Hughes health code.

The Griswold bill, as passed, while not providing the ideal system of health administration contemplated by the original Hughes act, may be considered a real step in advance over the present system and will constitute a foundation on which can be constructed, as the financial and taxation condition in the various subdivisions permits, the gradual inauguration of a complete public health administrative organization.

The bill requires that the various district health commissioners shall be licensed physicians, who, however, may devote such time to the duties, (whole or part), as the various local

boards determine. (The present law permits the employment of laymen as health officers.) The plan of selection of the district health commissioners is also removed from the supervision of Civil Service and the qualifications are to be determined by the board of health.

Under the provisions of the new bill, one-half of the salary of the health commissioner, nurse and clerk, whether whole or part-time, will be paid by the state, provided such part payment does not exceed \$2,000 per annum. Budgets determined for each health district for the ensuing fiscal year are to be passed upon and certified by county budget commissions instead of the district advisory councils as provided in the Hughes act.

In an effort to save the principle of effective health administration embodied in the Hughes act, the State Association and the State Department of Health endeavored to have inserted in the Griswold bill an amendment which would provide that the state's subsidy would not be paid except where the local health district employed a properly qualified health commissioner for full-time, and in such case two-thirds of his salary up to the amount of \$3,000 per annum should be paid by the state. This amendment, which would have provided a powerful influence toward putting the full-time health commissioner plan into operation within a comparatively short time, at a cost not exceeding that provided in the original Griswold bill, was rejected by a joint conference committee representing both branches of the Assembly.

Indicating the strong reaction against exorbitant budgets estimated for various rural districts, Senator Archer had previously introduced a proposal, (S. B. 197), in the upper branch to repeal the Hughes act entirely. A test vote on this proposal to recommend its passage was defeated by a vote of 18 to 10, indicating that a majority were in favor of supporting the principles of the Hughes act and saving the bill at least until it could be properly considered.

### OCCUPATIONAL DISEASES

The Wenner bill (H. B. No. 441), introduced last March and recommended for passage by the Committee on Labor, sought to include under the benefits of the Workmen's Compensation fund certain occupational diseases. Under pressure from organized labor, the Republican State Advisory Committee recommended the passage of some such legislation, and while the sentiment of some members of the medical profession indicated that the proposal would probably not adversely affect medical practice to any great extent but be beneficial in delaying more radical legislation including health insurance, considerable opposition also developed. At any rate, it was felt that the bill would be one more step toward complete state control of medical practice and medical services.

Because of the uncertainty in determining what



diseases are actually contracted in the course of employment and the insufficient data at hand on the subject, majority leaders in the legislature counseled delay in the passage of such a bill. This delay was perhaps wisely determined on, in view of the fact that the bill, as drawn, would be open to various constructions and abuses. As no estimate of the cost of operation and maintenance of the proposal had been made other than that purely speculative, and as the Industrial Commission with its present administrative machinery could not adequately care for the large number of added claims under occupational diseases, added to the essentially important fact that adequate compensation for medical services was not definitely stipulated, such enactment at this time was postponed.

A further argument in favor of postponing action on the Wenner bill was the passage by the Senate on December 17 of H. B. 450 (Mr. Hughes) requiring physicians to report, under penalty, to the State Department of Health certain occupational diseases enumerated in the bill and others to be designated by the department. The penalty section of this bill, as passed by the House last May, was unreasonably severe, and when up for action in the Senate the State Association secured an amendment to lessen this penalty and make it conform to present laws for similar offenses. At this time, the Senate amendment awaits concurrence by the House. It is pointed out that the data and statistics compiled by the State Department of Health under this law will later be a factor in determining whether or not an enactment along the lines of the Wenner bill would be reasonable or necessary.

#### ADMINISTRATIVE REORGANIZATION

The preliminary report made to the joint legislative committee on administrative reorganization by the surveyors employed to investigate state departments was submitted to the legislature in December. Action on some proposals, especially those having to do with the curtailment of administrative expenses, is expected to be taken by the legislature when it reconvenes early in 1920. A complete analysis of the proposals in this report will be found on page 31 of this issue.

Attention of the medical profession is called particularly to the following proposals which so directly affect medical practice that a thorough study of them is recommended:

The substitution of one for four commissioners for the work of the present board of administration and the administrative work of the board of charities.

Transfer of the bureau of vital statistics from the secretary of state's office to the department of health.

Consolidation under one administrative officer several of the present inspectional service and a similar consolidation of registering and licensing services.

Abolition of the present college of homeopathy at the state university and provision for a separate course in materia medica peculiar to the homeopathic school in the main college of medicine at the state university.

#### COMPULSORY HEALTH INSURANCE

Action on the Myers bill (H. B. No. 517) to provide a system of compulsory state health insurance in Ohio, and which was introduced last April, is not expected to be taken by the present legislature. Proponents of the measure, however, may be expected to take advantage of a sudden opportunity to push the proposal if it presents itself. Hasty action during an adjourned session would, however, not only preclude thorough consideration or the opportunity to secure necessary amendments, but might react detrimentally to the entire proposal.

Backed up by the announcement made by the governor of New York, that as a part of his administration program an effort will be made at the coming session of the state legislature in that state to pass a bill providing for compulsory state health insurance, The American Association for Labor Legislation will undoubtedly center its efforts first in that state rather than in Ohio, which had been expected as the battle ground for the first test in the inauguration of compulsory state health insurance in this country.

"The Medical Society of the State of New York, at a special meeting of its house of delegates some time ago unanimously adopted the report of its special committee on this subject, unqualifiedly opposing the passage of any law instituting a system of compulsory health insurance. This brings the question to a clear cut and definite issue in New York.

"As New York is one of the oldest and most highly developed states industrially, commercially and socially, it is an ideal state in which to discuss and test out this important subject. The limitation of the discussion to the legislature of one typical state will enable the opponents and advocates of health insurance to concentrate their energies to the best advantage," says the *A. M. A. Journal*.

#### PROHIBITION LEGISLATION

It will be remembered that the State Association Committee on Public Policy and Legislation, through the cooperation of the physician members of the public health committee in the House of Representatives, was directly instrumental in eliminating from prohibition laws passed last spring a number of unreasonable regulatory restrictions on the prescribing and compounding of drugs. This work has been effectively followed up during the December session and suggestions made to those who were drafting prohibition enforcement measures are expected to be favorably received.



### All Together Now

The dear old H. C. L. has hit *The Journal* along with other necessities and it is up to us to retaliate.

During the past few months the cost of publishing has risen nearly fifty per cent. and further increases are in prospect. To meet this increased cost it was necessary, in addition to the raise in membership dues affected last May, for the Publication Committee to adopt increased advertising rates for new contracts beginning with January and raise the subscription price from two to three dollars per year. Had not our publishers contracted for an advance supply of paper at a substantially higher price some time ago, it is probable that we would have been unable to secure it now at any price and would have been forced to suspend publication.

But the point of our argument is this: For the increased price our members and advertising patrons must have increased value—in other words, let's get our money's worth.

The obligation for bringing *The Journal* to this new standard of value is mutual. It has been and will continue to be our aim to make the news pages valuable as a medium of information on problems affecting medical practice in Ohio, as well as interesting in variety of material and style of presentation.

Under the management of Dr. McMechan, our medical editor, the scientific section has shown marked improvement and further development along this line may be expected.

The county secretary or correspondent is an essential factor in the scheme of improvement. Considering himself as a contributing editor of *The Journal*, he should see that the Columbus office is promptly and regularly supplied with every news item which will be of interest to members of the Association. That old saying about variety being the spice is as true today as ever, and if we are to make *The Journal* more interesting to the members of each county organization and to the membership at large over the state we must have news, personal news of the activities of each society and its individual members. Without it, we are helpless. Here are a few tips on reporting:

**County Society Reports.** These are of prime importance. They not only give organization impetus but furnish valuable suggestions to other counties formulating programs. A concise yet complete report of every meeting of every county society in the state should be mailed to *The Journal* within 24 hours after the meeting in order that it may be printed while still "fresh."

**Election of Officers.** Immediately after the annual election of county society officers *The Journal* should be furnished with a correct list of the names and addresses of new officers. This information is essential to Association headquarters in sending frequent bulletins to officers, and

in keeping the published roster accurate for reference.

**Public Health Notes.** Items concerning public health movements in your community are particularly desirable—such as campaigns for hospitals, free clinics, organization of public health societies, plans for health lectures and any other activity in which the medical society is interested.

**Personal News.** While many underestimate the value of this material experience has shown that it is very desirable and the Publication Committee believes that *The Journal* should print more of it. Items relative to removals of physicians, marriages, deaths, changes in hospital staffs, extended trips which take the physician out of the state or country for a time, appointments to state or municipal positions, will be appreciated.

So much for secretaries and correspondents, and now for the general membership. As joint owners in the official organ of the Association each member should be sufficiently interested in its success to offer criticisms and suggestions from time to time. Comments and suggestions for improvement will be gratefully received at all times.

Lastly, the support of the membership is solicited for our advertisers. Our advertising department is managed in conjunction with the Co-operative Advertising Bureau of The American Medical Association and no advertisements are accepted which have not been approved by that bureau, thereby guaranteeing the quality of products advertised. *The Journal* is only possible by reason of the funds secured from our advertisers. Without that income the present day cost of publication would make it impossible to issue a society publication without an additional assessment of at least five dollars per member. The size and features of each issue are governed to a large extent by our advertising sales. Our advertising sales depend upon the patronage conferred upon advertisers.

### National Health Legislation

*The Journal of the American Medical Association* has the following criticism to make on the failure of the sixty-sixth congress to enact beneficial public health legislation:

"After a continuous session of exactly six months, the first session of the sixty-sixth congress has adjourned without enacting any beneficial public health legislation; nor was any legislation detrimental to public health enacted. The Senate made progress with some measures of interest to the medical profession, while practically no consideration was given to any of this legislation by the House. This is due primarily to the fact that the Senate has a committee charged with the consideration of medical legislation, known as the Senate Committee on Public Health and National Quarantine, while the House has

no such committee, nor any committee that corresponds to it. The Senate committee considered and reported favorably a bill to provide \$1,000,000 for the study and treatment of influenza and kindred diseases, introduced by Senator Harding of Ohio; a bill to establish a division of tuberculosis in the United States Public Health Service, introduced by Senator Randsell of Louisiana; a bill making appropriations for the care and treatment of drug addicts, introduced by Senator France of Maryland, and a bill to admit government employees suffering with tuberculosis to army, navy and Public Health Service hospitals. The Senate passed a bill providing for the retirement of female army nurses, introduced by Senator Wadsworth of New York, and this measure will be before the House at the coming session for final action. The House Committee on Pensions favorably reported a bill to pension members of the Female Nurse Corps of the war with Germany, introduced by Congressman Fordney of Michigan. The regular governmental appropriation bills, including the necessary appropriations for the Medical Corps of the army, navy and U. S. Public Health Service, were passed. A number of other medical measures were introduced in both the Senate and the House, but no action was taken on them. Some relate to the establishment of the Department of Health in the federal government, and have been referred to in *The Journal* from time to time, while others provide for the establishment of bureaus of rural sanitation and maternity, and infancy hygiene in cooperation with the state governments. It is quite evident to those who have watched, or who are interested, in medical and health legislation, that, so far as congressional legislation is concerned, one of the big needs of the time is the creation of a committee on public health in the House of Representatives of the United States Congress."

#### Tribute to Medical Science

In his first public address following a recent illness, Congressman Brumbaugh before the Columbus branch of the American Legion, recently paid a glowing tribute to medical science during the world war.

Referring to the success of the physicians and surgeons in dealing with the sick and wounded in the war, he paid a high compliment to those professions and said, "I stand in amazement and thankfulness before Almighty God for the triumph of medicine and surgery over suffering and death in this horrible war."

Reciting what the government is doing for the wounded and incapacitated he asked: "And why should we not do it? So far as I am concerned as long as I am in congress I shall vote for any measure within reason that will benefit in any way the soldiers and the sailors. The cattle on 10,000 hills, the wealth of mine and sea; all the

money of the nation as you need it and as the country can afford it, is yours."

#### We're Proud of Dr. Kay

Recognized as one of Ohio's few surviving pioneers in medicine and surgery, and said to be the oldest practicing physician in the state, Dr. Isaac Kay of Springfield, on December 8, observed his ninety-first birthday. Dr. Kay at his advanced age retains all his mental and physical faculties in unabated keenness, modified only by the natural slowing down of bodily activity, and is at his office with remarkable regularity and punctuality. Always a great reader, and a close and intelligent student of current events, Dr. Kay, despite his advanced age, is exceptionally well informed on national events, and frequently pens newspaper and magazine articles dealing with present day conditions in comparison with those of 50 or 75 years ago. He is the author of a number of medical books.

Dr. Kay is the father of Dr. Clarence H. Kay of Springfield, and Charles S. Kay, state representatives from Clark county. Born near Chambersburg, Pennsylvania, in 1828, Dr. Kay removed to Ohio in 1836, and after completing his medical education at Starling Medical college, Columbus, entered practice in 1849 at Lewisburg. In 1853, he established offices in Springfield and has practiced actively there ever since. Dr. Kay not only claims the distinction of being Ohio's oldest practicing physician, with a record of 66 years of practice, but for over 62 years has been a member of the Ohio State Medical Association.

In 1869 Dr. Kay with Drs. O. G. Sheldon and E. W. Howard, was named on a committee to secure state legislation improving the opportunities of studying practical anatomy, and his work in this connection has been regarded as one of the most signal achievements ever recorded in Ohio by a member of his profession.

In recognition of this service, the Ad Eundem degree in medicine was publicly conferred upon Dr. Kay by Miami Medical College of Cincinnati in 1871.

On the fiftieth anniversary of his graduation, he was elected president of the Starling alumni association, and signalized his incumbency by producing a completely classified catalogue of all the graduates of the college from its foundation in 1848, the plan proving so popular as to be patterned immediately by many other medical colleges and universities.

When the war was at its height, it was Dr. Kay's heartfelt wish to live to see peace, and his ninetieth birthday, coming shortly after the signing of the armistice, saw him a most enthusiastic rejoicer over the fact that hostilities had ceased. Having lived to see the war ended, it is now Dr. Kay's keen desire to cling tenaciously to the slender threads of life, until final ratification of the peace treaty and absolute establishment of peace.



# Pre-Operative Treatment of Hyperthyroidism

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**Editor's Note.**—While the question of whether the treatment of hyperthyroidism should be medical or surgical, is still a mooted one, by those concerned in its cure, there are undoubtedly cases of goiter which apparently demand surgery as a life saving measure. When such cases present it is imperative for the surgeon to understand every detail in the pre-operative treatment of hyperthyroidism so that the hazard of life in the operative procedure may be reduced to a minimum. Success in the management of these cases is based upon clinical experience. While the removal of focal infection, X-ray treatment, local injections and ligation of the thyroid arteries may affect abatement of symptoms, necessity for radical intervention remains. In such patients alkalization and proper diet are pre-operative necessities. General and heart tonics, according to Dr. Haines are indicated as well as sedatives. Morphine and belladonna may also be of value. While Dr. Haines has not found it necessary to "steal the thyroid" he deems it important to prolong pre-operative treatment as required, and to use acute discernment in selecting the time to operate.

**H**YPERTHYROIDISM is one of the most interesting and curious of the clinical phenomena which confront the physician in his daily rounds. During the recent recruiting of troops it was the writer's privilege to *check up* the reports of thousands of physical examinations with a view to recommending the draftee for certification into the *Colors*.

The exigencies of the times and the high pressure under which all loyal, patriotic citizens were laboring for the success of the *Cause*, induced symptoms closely resembling hyperthyroidism in enormous numbers of men who came to be examined, symptoms which passed, in by far the greater number of instances, soon after the *Rookie* settled down to the business in hand, at the cantonment to which he was assigned. A small percentage of the men examined were rejected for this cause by the Draft Board and a number of others were returned as physically unfit because the symptoms of hyperthyroidism persisted or became aggravated during their stay at camp.

## CAUSATIVE FACTORS

The large amount of clinical material presented at the Draft Board gave ample opportunity for observation and this led one of a speculative turn of mind to again review the literature on causative factors in the production of this phenomenon. Herein one is carried far afield and into the bogs and fens of the various hypotheses anent the origin, influence and destinies of internal secretions. Numerous interesting, elaborate and some fantastic theories are encountered; some of them based upon animal experimentation, others on observations made while studying the natural course of the disease in man and still others founded upon the post-operative behavior of patients subjected to some operative procedure for the relief of symptoms produced by the over-active thyroid.

The divergent views expressed and the dis-

cordance of experimental results leaves doubt in the mind of the reader and inability to form definite conclusions relative to the causative factor or factors in the production of the clinical syndrome which we designate hyperthyroidism.

Owing to our lack of knowledge as to the cause of hyperthyroidism, it is obvious that success in the management of the cause is based upon clinical experience rather than upon scientific data.

Until such time as the physiologist and pathologist discover the cause or causes of hyperthyroidism, the surgeon in conjunction with the internist should make a most searching physical examination of the individual patient with a view to discovering and removing pathological conditions other than those directly connected with the thyroid gland.

## METHODS OF TREATMENT

The removal of focal infections, tonsil, teeth, sinus, gall bladder, appendix and tubes has been provocative of much good in allaying the physical storm preparatory to direct attack upon the thyroid.

X-ray treatment, direct exposure to the sun's rays and other forms of local treatment, with the possible exception of the injection of boiling water into the substance of the gland, have at my hands produced but slight and transitory improvement in the general manifestations and have served to render removal of the thyroid difficult in consequence of the peri-adenitis induced by these local irritants and the resultant dense adhesions between gland and capsule.

Removal of the superior and middle sympathetic ganglia located in the carotid sheath, has been practically discarded as an operative procedure and still this operation at one time had a number of adherents who reported cures following its performance.

Ligation of two or more of the arteries supplying the thyroid is very constantly followed by immediate, marked abatement of symptoms and a small percentage of permanent cures.

\*Read before the Surgical Section of the Ohio State Medical Association, during the 73rd Annual Meeting, at Columbus, Ohio, May 7, 1919.

## PRE-OPERATIVE CARE AND MEDICATION

It is almost needless to say that any surgical procedure in the pre-operative management should be done under local anæsthesia.

Large numbers of these patients who have had symptoms over a long period of time, before coming under observation, are found to be carrying badly damaged hearts and suffering from some degree of acidosis.

Not to elaborate a theory but merely to record a clinical observation the writer can assure you that marked improvement in force and endurance of the heart muscle follows relief of the acidosis all too frequently to be placed in the realm of coincidence.

Tachycardia, jaundice, dry skin, fissured nails, constipation, loss of appetite, extreme restlessness, albumin, granular and hyaline casts are some of the prominent features in the neglected cases.

The interest of such patients is best subserved by placing them in a darkened room in a quiet part of the hospital, excluding visitors and administering alkalies and carbohydrates.

General tonics and heart tonics, preparations of digitalis or in case of failing compensation, strophanthus and chloral or bromide to promote quiet, induce rest and sleep are of signal value in the pre-operative management of the patient. The patient should receive a nutritious, well selected diet and a round dose of castor oil daily.

Morphia for its well known physiological influence in checking secretions should be reserved as a last resort and the solution of the bimeconate of morphia should be administered in doses of 1 cc. to 4 cc. if the urgent demand for morphia arises. Round doses of Tr. Belladonna 4 cc. to 6 cc. given three times daily for a week will cut down the excessive bronchial secretions with which these patients annoy the anesthetist at the time of operation.

We have had our share of extreme hazards in this type of operative work but in no instance has my anesthetist found it necessary to resort to phantom anesthesia and other deceptive procedures prior to operation on the gland. On the contrary, we are fully convinced from practical experience that the full confidence and hearty cooperation of the patient are of inestimable value in the pre-operative management of all goitrous patients.

Incipient and other forms of tuberculosis, malignancy, diabetes and other general physical conditions, should receive recognition and proper treatment when they are co-existent with hyperthyroidism. By careful study of the patient's physical condition and strict attention to the general details of pre-operative management as herein outlined, one may convert an extremely unsafe into a fairly safe surgical risk and proceed with the final operation.

Finally, I know of no other class of cases, not

even excepting the aged and infirm prostatic, wherein painstaking, prolonged pre-operative treatment and acute discernment in selecting the time to operate are more essential to success than in patients suffering of the late manifestations of hyperthyroidism.

1606 FREEMAN AVE.

## DISCUSSION

DR. E. W. MITCHELL, (Cincinnati): This is one of the diseases in which the physician and the surgeon should work in very close harmony and cooperation. I believe that if the pre-operative preparations are very carefully and thoroughly carried out, we will in a very large proportion of the cases save them from the surgical table.

Dr. Haines has spoken of the very large number of cases of hyperthyroidism which were found in the examinations of the draft boards. That has emphasized the fact which has been very well known for a good many years, that there are in the community a very great many of the illy developed cases, the partially developed cases, cases which may have merely a tachycardia with general nervous symptoms and very little enlargement of the thyroid possibly and no exophthalmos. These are the cases that we ought to watch for very carefully indeed. If those cases are taken early, in ninety-nine per cent. of the cases, I believe they can be cured by medical means.

If we accept the theory of the excessive production of the thyroid secretion as the cause of the disease, we have perhaps not gotten to the really fundamental cause. The question is—what has started this gland to secrete excessively? Now, ever since my student days, and very long before, great emphasis had been placed upon the nervous influences. Undoubtedly, they are of very great importance and must be taken into account in all of our plans of treatment, and most carefully shown. Yet it may be possible that toxic influences are the primary cause.

Dr. Haines has spoken of removing the sources of toxical infection. I think that is a matter of very great importance, and in the earlier cases, where the patient is in condition for operation, I believe that is a very important plan.

Some years ago, Dr. William Hanna Thompson, of New York, wrote a small brochure on hyperthyroidism in which he attributed the cause of the disease to toxemia from the intestinal canal. He advocated a diet which was not liable to have putrefactive changes, very free evacuation of the intestinal canal, and securing as nearly as possible antiseptic conditions in the canal, particularly advocating the administration of mercurials, as intestinal antiseptics. This diet, I believe, is an exceedingly important part of the treatment, and I would like to just emphasize that in connection with Dr. Haines' suggestion, that a good diet should be selected, that the diet for these cases should be a non-proteid diet, that



we should rule out meats, proteids, very largely. I usually allow a small amount of eggs occasionally to these patients after their diet has been initiated.

Beginning these patients with a good mercurial purge, followed by saline, putting them upon an absolute milk diet for at least a few days, a buttermilk diet, or if not buttermilk, a milk which has been peptonized, or to which you add bacilli bulgaricus, you will find that you allay your alarming symptoms very much more rapidly than upon a general diet. A little later, vegetables and cereals are added to this diet.

I think Dr. Thompson made a very important contribution to the medical treatment of these cases, and that this is an important part of the pre-operative treatment of your cases,—a non-putrefactive diet, free purgation and intestinal antiseptics, as far as it is possible to secure it.

Of course, the doctor has emphasized the importance of rest. There should be as nearly absolute rest as it is possible to give the patient.

Then, I want to speak of some of the therapeutic means that are to be used. It is very notable that symptomatic treatment amounts to very little in your real cases of hyperthyroidism. Digitalis does not reduce the rate of the pulse, nor does strophanthus materially. You do not stop the diarrhea by giving bismuth and the remedies that you use for an ordinary diarrhea, but if you put your patient at rest on a proper diet with free purgation, intestinal antiseptics, ice-bags over the throat, ice-bags over the heart, cold sponges, you have used the most important means for reducing the tachycardia, the nervous symptom and the sweating.

Now, therapeutically, I was years ago very much impressed with the value of the quinine treatment, and I have seen very striking results in some of the cases and in some very bad cases. I have one case in mind that was cured by that class of treatment that was an extremely bad case, almost twenty years ago. I believe that that is an important therapeutic measure to use.

Then, if we can combine with all of these measures the psycho-therapy that Dr. Crile elaborated on so carefully some years ago, I think we will get our patients into the best possible condition for the hands of the surgeon, if he has to have the misfortune to come finally to the surgical operation.

DR. J. C. OLIVER, (Cincinnati): As I sat here this morning, I was impressed with the fact that there is a certain phrase that has been repeated time after time in relation to these different papers that have been presented, and that phrase is *a skillful surgeon*. Going back to the early papers of the morning, we were told that a skillful surgeon is one who ought to operate for Cæsarian Section, a skillful surgeon is one who ought to treat gall-stone. Now we are told that a skillful surgeon ought to treat hyperthyroidism.

Now, gentlemen, the mistake that I see this morning is that there has been no definition of what is a skillful surgeon. Of course, if I read a paper on any subject, I will admit that I am a skillful surgeon. Any man that reads a paper on a subject, a man who has taken time enough to think about a subject, may be able to write a very good paper, but it doesn't necessarily follow that he is a skillful surgeon.

I think the mistake is in believing that a surgeon is simply an operator. Now, a skillful surgeon must have more qualifications than manual dexterity and ability to carve flesh. A skillful surgeon is, first and foremost a good physiologist. Second, he ought to be at least fairly well acquainted with pathology. Third, and I think this a very important point, he should be a good physician. If he lacks any of these three qualifications, he certainly will lack a certain amount of knowledge which will go very far to making a good surgeon out of him.

I would rather use the word *good* than *skillful*, because skillful means manual dexterity.

Now, when you consider these subjects that have been presented this morning, you see these same ideas running all through, that a man who is a general surgeon ought, according to one set of men, do Cæsarian Section, and according to another set of men, he ought not to do Cæsarian Section. Probably both opinions are right and both are wrong. It depends upon what you mean by a general surgeon.

The point that I wish to emphasize, Mr. Chairman, is that the thing that we must consider more carefully is not so much a condition in a gall bladder, or a condition in an appendix, but the conditions in the surgeon's brain. All men will not be free and equal in spite of the constitution of the United States. Were this true, there would not be large, outstanding men in the surgical community. If it was only a matter of technique, judgment might very well be thrown to the winds. What is the use of judgment, if we can lay down rules, hard and fast rules, for the performance of operations or treatment of disease?

DR. SUTTON (Zanesville): I only want to emphasize the suggestion made by Dr. Crile, a good many years ago, of stealing these glands, and when he made the suggestion, I had no idea that they could be so easily stolen. I have frequently sent these patients to the hospital for treatment and given them a little whiff of ether for a few days, and then gone in and put them to sleep and taken the glands out and even kept them quarantined against all except their parents and sent them home without their knowing that the gland had been removed. I put a great deal of stress on that.

Simmering our distinguished and learned medical friend's statements down, he gives them a good physic and a hot bath, and that is about all there is in the medical treatment for this



disease, and when it comes to the skill of removing the thyroid gland, I removed one two years ago at a clinic I gave at the Good Samaritan Hospital for the benefit of our District Society, and no doubt there are quite a number of men here who will bear out the fact that I did not put one single hemostat on and had no hemorrhage to speak of at all. A man need not have great skill to remove the thyroid. If you can gouge out a toe-nail, you can remove the thyroid. I have taken my technique from Dr. Bonifield's cow—I horn them out.

DR. CRILE (Cleveland): Dr. Sutton has spoken of the way in which he manages this type of patient. I agree with Dr. Haines and Dr. Sutton that there are cases in which one must tread very lightly and operate very lightly and very progressively, a little at first, and then progressively more until one may remove enough thyroid gland tissue to make a cure.

I am always glad to hear Dr. Mitchell in his discussion, and I think that since the war has been mentioned, we found in France a very large number of cases of acute exophthalmic goiter occurring in soldiers. Now, as a matter of fact, it isn't necessary to have the exophthalmos at all. I think myself that you may have various phases of the same fundamental thing. In some cases, it more particularly affects the heart, in some cases more particularly the digestion, and usually, of course, the nervous system. Therefore, as Dr. Mitchell has said, we will find in the community a great many cases of moderate forms, light forms, evanescent forms of exophthalmic goiter. It is a type in which something has happened so that the patient is unable to devolute his gland that has become built up by some exciting cause, and that leaves him in a position where I think surgery is of great service.

DR. OLIVER: In those cases of mild hyperthyroidism, what effect was produced by the armistice?

DR. CRILE: I don't hardly know, but I should say very good myself.

DR. GOODHUE (Dayton): In the way of pre-operative treatment, the removal of intestinal infection and rest have been spoken of. The internists give certain remedies, certain medicines—they accomplish results by certain forms of diet. It was my pleasure two years ago to see an attempt at the same thing done by Sir Arbuthnot Lane in Guy's Hospital by short-circuiting the intestines, knotting the ileum with the sigmoid, and I was asked to go through his institution and examine the patients upon whom he had operated for this purpose. He had something like a dozen patients there who had entered with very large thyroid glands, and I must say, getting testimony direct from them, not having any intern or any one to suggest to them what they should say—he left the ward for me to examine those patients and get their explanation—it did seem marvelous the report that I got

from those patients of the effect of relieving the intestinal infection by operative treatment.

Another method spoken of as good in the way of pre-operative treatment is rest. I have often found that it was the hardest thing in the world to get it. You ask them to lie in bed, you put them there, and it isn't rest. It is the most irksome thing in God's world for them, and in those cases, it has seemed to me the best treatment before removal of the gland is ligation of one and then perhaps in a short time another of the superior arteries.

DR. HAINES (closing): I am grateful to you for the discussion that you have given this little effort, and I don't find anything very much contrary to the ideas that I have attempted to put down.

In opening the discussion, Dr. Mitchell hit off a number of very good things, but he inadvertently made what we term an Irish bull when he said he excluded or put aside the proteins, and then he put his patients on milk. I am sure the doctor doesn't mean this. Milk is one of the highest protein bearing articles which we consume in the way of diet. He further runs counter to the teachings I received concerning the physiological influence of digitalis. I recall no instance in the literature nor in any teaching wherein it does not say that digitalis slows the heart pulsations and increases the force of the right side. Digitalis is an eliminant as well as a heart stimulant.

The quinin-urea treatment referred to by Dr. Mitchell is recorded by the late Dr. Forchheimer in his work and is to be given for from two to three years. The type of case which I am presenting to you, the fulminating type, the type which needs a surgeon, the type which needs a real doctor, this is not the type which can go on two or three years. They are going to have a first-class funeral by that time in all human probability.

I am not discussing the case that has undergone certain degenerative changes. Those cases will get well of themselves if they are put to bed. We don't have that patient in mind when we are discussing acute hyperthyroidism at all. He has passed that stage long ago.

I was much interested in Dr. Sutton's method of *horning* them out. Our versatile friend has certainly been very lucky. There is certainly some special deity presiding over his ministrations, when he don't have to have hemostats in the removal of the thyroid.

Dr. Goodhue spoke of Dr. Lane's work along this line. You know, in Guy's, they are obsessed with the idea that destroying the infectious material contained in the colon will cure anything. I asked Mr. Tubby this question: "If you had a goiter yourself, what would you have done with it?" He said, "I would have my colon taken out. That is all."

Dr. Crile has practically endorsed the paper. I was very much in the position when I

arrived here this morning, of the late Mr. Jefferson. When he was a young man, he was informed that the admiring populace of the town was going to make him a present that evening of a watch. He thought up many good things to say about how he would remember the open, honest countenance of his friends when he looked at the face of the watch, and the hearty grasp of the hand of good fellowship that came with it when he saw the hands sweeping around, and

many other appropriate things that he was going to say before the curtain that night when they presented him with the watch. When the time finally arrived, a man came out and with a few choice remarks such as are usually uttered on these occasions, he presented Mr. Jefferson with a cane, just an ordinary walking-stick. I came prepared to take part in a symposium on goiter, instead of reading a paper on the subject.

1606 FREEMAN AVENUE.

## The Value of Pain as a Symptom.\*

Leland Baxter, M. D., Newark, Ohio

**Editor's Note.**—Pain is only of value as a symptom, if it can be properly interpreted. It is a symptom of many diseases and perhaps the one to which patients most object. While it may become intolerable at times, pain, is a special sense for the preservation and protection of the individual. Pain sense may be diminished, destroyed or obtunded by certain diseases or drugs. It is also markedly affected by extreme emotion. As pain may be

other than that of the real seat of the disease it must be painstakingly traced to its source before it can be properly relieved. Just what the pains of exhaustion are due to is a question, but such pains are a daily problem to the clinician and occasionally he is put to his wit's ends to remedy them. There are also occupational and habit pains. These require careful diagnosis lest drug-addiction be added to a mechanical or a more or less neuropathic condition. It is also well to remember that while pain may be suggested, it may also be relieved by suggestion.

**A**T least ninety per cent. of diseases begin with pain or have pain as a prominent symptom at some time in their course. Patients endure most symptoms with equanimity hoping for their early amelioration but pain rapidly becomes intolerable. Very many confuse pain with the disease and think as soon as the pain is relieved they are well. Unscrupulous medicine venders and practitioners in and out of the profession have fostered the idea that pain always means some terrible disease. No symptom arouses more fears nor has any symptom been more exaggerated. We know that intense pain such as migraine may be harmless and that fatal diseases like nephritis may be painless.

### PAIN—A SPECIAL SENSE

Pain is not an objective symptom such as glycosuria or fever. It is a mental state: "a recognition in consciousness of an injury to the body or feelings." Keeping this in mind will help us to better understand pain phenomena. You take down your telephone receiver and some one tells you that stocks have advanced and you have made a fortune; again you take the receiver down and some one tells you your best friend has been killed. The same phenomena takes place in the wire in the second instance that does in the first, the pleasure or sorrow arises in your consciousness. You reach out one hand and touch a piece of velvet and with the other touch a hot stove. The same phenomena travel up the nerves of one arm that does the other; the pain arises upon the elaboration of the sensations in the

brain. If the nerve be cut or poisoned with cocaine and no impulse reaches the brain there is no pain regardless of the extent of the burn. Pain is a special sense like sight or smell. It has its special endings, fibers and centers in the brain. In our evolution we have learned that certain things, for instance extreme heat or cold, are injurious to the skin and these are painful. The brain itself or the intestines were never subjected to such injuries hence can be cut or burned and the patient though awake, be unconscious of it. But compression of the brain or irregular peristalsis in the bowels causes pain. Swelling in an organ confined in a capsule means ischemia and death and is painful. Each part of the body has developed pain endings to respond to the injuries it can expect to receive. The more important the organ or the more liable it is to injury the better its supply of pain nerves.

Pain is a special sense given by the ALL WISE CREATOR for the preservation and protection of the individual and the race. Pain is the healthy reaction of the mind to an injury—a blessing and not an error.

### VARIATIONS IN PAIN

The reaction to painful stimuli varies with different individuals and is far from constant in a given individual. One patient will endure stoically an attack of appendicitis or a broken leg and another will complain bitterly. A sliver in the finger hurts worse when you are tired or have the headache than when feeling prime. The pain centers are more developed in some than in others. Along with other centers they seem more acute in the intellectual. Men stand pain less than women and the centers are more acute in early adult life. Fearful anticipation magnifies

\*Read before the Medical Section of the Ohio State Medical Association during its 73rd Annual Meeting at Columbus, Ohio, May 7, 1919.



pain: we can laugh at an accidental cut that would seem fearful indeed if it were premeditated. In neurasthenic and psychasthenic states and in intoxications and infections often the threshold of pain sense is lowered and pains ordinarily imperceptible may be brought into consciousness. Electrical changes connected with storms have the same effect and rheumatic or injured joints are good barometers in some people. I knew one patient that always suffered intense pain in the right parietal region before a storm. He had received an injury there at one time.

Pain sense is diminished or destroyed by certain diseases as Syringomyelia or by intoxicants such as morphine, alcohol, ether, etc., centrally and cocaine locally. In Tabes and General Paralysis the pain sense is diminished or delayed. In Dementia Præcox pain sense seems at times to be almost absent. I have seen patients pull out their hair. I remember one who used to rub pepper in his eyes and another that picked out a testicle with a pin. None of them seemed to suffer at all. Marked emotion often paralyzes the pain center. Religious enthusiasts horribly mutilate themselves, and soldiers in battle often do not suffer when severely wounded. People in anger will tolerate abuse that in their cooler moments they could not endure. Sudden, unexpected injury often confuses and numbs the pain sense. Fear is an emotion that lessens pain perception. Most of us have started to a dentist and lost the toothache on the way, and had patients come into the office that could not remember their pains. The fear of having a tooth pulled or being told of an incurable disease scares the pain away. I have seen severe pain as in appendicitis scared away temporarily. Some can voluntarily inhibit pain. I remember in the grade school at home we had two pupils that amused the rest by running hat pins down to the bone in the thigh. We read of a man that could hold a hot half dollar in the hand till it burned its way into the flesh.

#### SUBJECTIVE AND OBJECTIVE

Pain may be objective or subjective. Objective pains are caused by stimulation of the endings or fibers of the pain nerves. If the fibers then the pain is also referred to the endings. Objective pain is usually felt at the site of injury and in proportion to the extent of injury but this is not always true for the pain though objective may be felt at a point distant from and in no way connected with the site of disease. This is more apt to occur with children and people with an unstable nervous system. Pneumonia is often diagnosed as appendicitis in children and abdominal pain in adults with pneumonia is not uncommon. I have twice seen pain in the lumbar region in pneumonia so severe as to require a hypodermic of morphine. We have all been dismayed by the appearance of pain in the side of the chest opposite a pneumonia but have found later that there was no spread of the disease. Recently a patient came

in for an X-ray of a tooth. The film showed a healthy root and the dentist refused to pull it. She was quite put out at both of us. Three days later she awakened in the morning and told her husband she had found the tooth on the opposite side. This was ulcerated and was extracted with relief of the pain. I have seen transferred appendix pain. Alger reports a case of appendicial pain due to eye strain, relieved by glasses and recurring three years later when the glasses were broken. Pain has been reported in the toe from perirenal abscess and in the chin from a mole on the leg! In the face of many instances of pain at a distance it behooves us to relegate no pain to the subjective class till after a very thorough and repeated examination.

Intermediate between the objective and subjective pains are some that partake of the qualities of both.

#### PAINS OF EXHAUSTION

Perhaps the most common of these are the exhaustion pains. Many if not most people develop neuralgia of the fifth nerve when tired: ordinary headache. Lumbar neuralgia is common in infections and in tired states irrespective of the use of the back muscles. I have known of several instances of pain in the throat from exhaustion. I have seen two cases, mother and daughter that suffered from laryngeal distress and coughed when tired or excited. These pains are probably due to toxins in the blood or malnutrition. Their varied and peculiar location is due to the special susceptibility of the nerves. Often in chronic exhausted states the pain seems to localize continuously in some spot or organ in the body and lead to the diagnosis of organic disease. The ovaries and heart are very common locations for this kind of a pain. Perhaps those patients are more fortunate whose pain comes in the heart for then it is not removed! Many an ovary and appendix has been sacrificed to this kind of a pain. The immediate results because of the rest in bed are often good but sooner or later the pain recurs and the last state is worse than the first. I often tell patients that come in complaining of a pain and who are in the state of chronic exhaustion or in whom I can find no gross lesion that I could remove what seems to be the offending organ but unless I could remove the nervous system and repair it we would accomplish little. The Lord provided Israel with a way of putting their sins on a scapegoat and driving it off but He did not so make the human body. A rest in bed and a philosophic view of life will do more than surgery for these people.

Occupational pains come in this intermediate class in which the use of certain groups of muscles in a definite motion becomes painful.

#### HABIT PAINS

Habit pains are a most fruitful source for the charlatan. A long continued or oft repeated pain

of definite location forms associations in the mind. Pain being a mental state, a sensation, its perception becomes easier by repetition and finally the repetition of the circumstances or associations of the pain recall the pain itself in impressionable minds. If one eats cheese until sick, next day the thought or smell of cheese nauseates him and if he be neurotic he may vomit again. So pain often continues long after the disease is well. Patient D. P., aged 10, suffered from an attack of inflammatory rheumatism. I saw him with his regular physician and he was carrying a temperature and the joints were swollen and tender. After a usual course the swelling and fever subsided but the pain continued. Finally a local Pow Wow "doctor" was called in. He made a few passes over him and told him he would surprise his father next morning by getting up and dressing and going to the barn while he was milking. And he did. The pain left. The association of pain and motion in the joints was fixed in the boy's mind and each motion recalled the pain sensation till it was relieved by suggestion. Mrs. L. K. suffered for years with pelvic inflammation, was finally operated but not relieved till after a course of violet ray treatment then new and quite the vogue. It is frequently easier to remove the disease from the body than from the mind.

Subjective pains have no real foundation but I believe if they resemble closely a real pain that at some time they must have had a similar real pain. The absolutely fictitious pains are easy to detect. D. F., aged 5, while playing had her wrist hurt presumably. Her father phoned me about midnight and from his description I felt the injury trivial. I prescribed hot applications and codeine. Next morning she was brought into the office carrying the arm in a sling. It was painful and paralyzed. I examined it, put it through passive motions and in fifteen minutes it was as good as the other arm and smiles replaced the tears.

Mrs. S. who was suffering from a nervous breakdown phoned one morning that when she turned on the back she suffered excruciating pain. I went to her home, examined her carefully and said if she would turn on her face first she could turn on the other side and in the afternoon she could lie on her back. This she was able to do.

A colleague of mine was called to see a case of gall stone colic that he had treated before. He had forgotten his hypodermic syringe but the room being dark he substituted his tie pin with prompt relief of pain. N. L. was taken with a pain that I diagnosed as gall stone colic, at least I felt it was a real pain. I gave her a hypodermic. Next night it recurred with a hysterical setting. I gave less morphine. The third night it was decidedly suspicious so I showed her mother a sterile hypo which I assured her would put her to sleep. This it did and next night I was not called. M. M. suffered for years with attacks diagnosed as ap-

pendicitis, gallstones and floating kidney. Operation revealed all three and they were corrected. But the attacks continued with this difference, they came on when she was angry. I gave her hyoscine and apomorphine hypodermically three times and she was permanently cured.

#### SUGGESTION

Pain can be suggested in the hypnotic state but undoubtedly this is often unwittingly done by the questions of the physician and purposely done by patent medicine advertisements.

Just as pain may be brought on by suggestion so it may be relieved by suggestion. Some people seem to possess a hypnotic personality. From all times and in all races there have been Healers, "medicine men." In our present state of civilization a little more than a personality is required. Nevertheless in the face of sickness and death man tends to revert to his primitive fears and superstitions. Education does not seem to eradicate it for the educated and professional quite as readily as the ignorant seem to grasp at the miraculous and follow all sorts of pseudo-scientific cults. The present requirements for the doctor in medicine are high and only by great diligence and labor and expense can it be obtained. Nor is the financial outlook much better than in the ministry. Hence have arisen the short-cut cults that boldly advertise higher remuneration and less expense. There is a suggestion anesthesia as well as a suggestion pain but the relief of pain does not mean a cure of the disease. If we will fight against these superstitions we must have a better understanding of pain in and out of the profession.

#### SUMMARY

Pain is a sensation, the recognition in consciousness of an injury to the body.

The pain sense is necessary to the health of the individual.

Pain is not a disease but the recognition of a disease by the mind and its severity does not indicate the extent of the injury.

Pain may be objective and real or subjective and imaginary or partake of the qualities of both.

Anesthesia may be real, due to disease or subjective, due to suggestion.

The most disturbing pains for the physician are the exhaustion and toxic pains; the most fruitful for the charlatan, the habit pains.

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#### Druggists Dry Enforcement

Resolutions urging that the legislature adopt a prohibition enforcement measure with an emergency clause were adopted by the Columbus Retail Druggists' Association at a recent meeting. It was urged, however, that provisions of the Ohio law should not conflict with federal statutes relating to the drug trade.



# Clinical Serology in Relation to Diseases of the Eye, Ear, Nose and Throat\*

Oscar Berghausen, B. A., M. D., Cincinnati

**Editor's Note.**—The clinician is fortunate who has been progressive enough to add the interpretations of hematology and serology to his diagnostic armamentarium. According to Dr. Berghausen the method of "icebox fixation" has given him more positive reactions in known syphilitics than any other. Tabulating the results of his tests in one hundred and thirty-one cases, suspected of having lues, Dr. Berghausen shows in a very striking manner, not only the prevalence of syphilis as a causative factor, but also its peculiar incidence in various eye, ear, nose and throat conditions. Serological methods have verified the clinical observations of years. The newer methods in the determination of the chemistry of the blood are also becoming of value in disclosing factors causing diseases of the special senses. These determinations should be made, as Dr. Berghausen suggests, with the patient upon a strict diet, otherwise quantitative analyses have little value. Occasionally these determinations call for verification by the spinal fluid test and abnormal colloidal gold curve reaction. It is also of some importance for the specialist to be able to use the reactions for tuberculosis, malignancy and blood transfusion.

**M**OST diseases directly or indirectly affect one or more of the special senses. Diseases of the special senses in turn affect the general state of health of the individual. For that reason methods which advance our knowledge of general diseases also become of great value when applied to diseases of the eye, ear, nose and throat. In the field of serology, new methods have been developed which assist in the diagnosis and treatment of diseases in general, and diseases of the eye, ear, nose and throat, in particular.

The study of hematology had its real beginning when Ehrlich first differentiated the anæmias. Serology had its real beginning when von Behring and Roux discovered the antitoxin for diphtheria; was later advanced by the observations of Wright and the introduction of autogenous vaccines, and still later by Ehrlich through the discovery of salvarsan. Hematology was advanced by the discovery of immuno-diagnostic measures, especially by the introduction of the Wassermann reaction, and still later by the rapid clinical methods for the determination of blood sugar, urea, uric acid, creatinine, and the carbon dioxide content of the blood.

The physician is called upon to make a diagnosis, and in most cases he succeeds for practical purposes, by employing clinical methods alone. In a certain percentage of cases, especially the more chronic, he must call upon special methods to assist him. Methods enlisting the aid of researches in hematology and serology, and depending upon the clinical interpretation, form the basis of clinical serology. The clinician has added special studies in hematology and serology to his clinical armamentarium. Today it will be impossible for me to discuss the whole subject. I merely wish to discuss certain results obtained by applying clinical serology to some diseases of the eye, ear, nose and throat.

## THE WASSERMANN TEST

Syphilis so frequently attacks the organs of special senses that the possibility of its presence must always be considered. It has been my ex-

perience that clinicians are usually correct in their diagnoses of syphilis of the nose and throat. At least the percentage of positive Wassermann reaction is greater in cases suspected of having syphilis of the nose and throat, than in cases suspected of having syphilis of the eye. It must be remembered that in the secondary stage of syphilis, the diagnosis is most readily made, and the Wassermann reaction is practically always positive. However, it is in the latent stages of syphilis with involvement of the special senses, that the services of the specialist are sought, and it is in these cases that the diagnosis is most difficult. Usually the patient does not know that he has had lues, or denies it if the question be asked. It is for this reason that the Wassermann reaction is so frequently asked for, in this group of afflictions. The method of ice box fixation, *i. e.*, allowing the fixation of the complement at very low temperatures 0° C or 2° C, for a period of 18 to 20 hours, has given me more positive reactions in known syphilitic cases, than any of the other methods which I have employed.

## SYPHILIS AS A CAUSATIVE FACTOR IN VARIOUS EYE, EAR, NOSE AND THROAT CONDITIONS

The following tables will give some idea as to the frequency of syphilis as a causative factor in a variety of pathologic conditions involving the eye, ear, nose and throat.

TABLE I

Results of Wassermann Tests in 131 cases suspected of having lues.

Conditions Involving	Total	Negative	%	Positive	%
Eye	84	27	32.2	57	67.8
Nose and Throat	47	26	55.3	21	44.7
Total.....	131	53	40.4	78	59.6

TABLE II

Diagnosis	No.	Negative	Positive
Headaches .....	12	12	0
Vertigo .....	5	5	0
Iritis, Cyclitis.....	23	16	7
Exudative choroiditis	8	8	0
Retino-choroiditis .....	13	4	9
Ophthalmoplegia .....	8	4	4
Retro-bulbar-neuritis	5	4	1

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association during its 73rd Annual Meeting at Columbus, Ohio, May 7, 1919.



Hemianopsia .....	2	2	0
Optic atrophy.....	8	2	6

TABLE III

Suspected Lues Involving the	No.	Negative	Positive
Nose .....	8	2	6
Throat .....	20	9	11
Otitis media.....	8	4	4
Epistaxis .....	5	5	0
Tonsillitis .....	6	6	0

The number is not a large one and represents only those in which a fairly accurate diagnosis was obtained. The results would tend to show that the patient complaining of headaches supposedly due to ocular trouble, is seldom a syphilitic. Patients suffering from occipital headaches, more intense at night, are not included in this classification. Patients complaining of vertigo, from exudative-choroiditis, retro bulbar neuritis and hemianopsia are usually not syphilitic. It is in the patient suffering from iritis or cyclitis, retino-choroiditis, optic atrophy or ophthalmoplegia that we find lues as a frequent causative factor. This has been known for many years; serological methods merely help in making the diagnosis.

Since the spirocheta pallida involves the central nervous system so early in the course of the infection, and since fully 20 per cent. of syphilis show changes in the spinal fluid although many show no clinical symptoms, it is no wonder that obscure lesions develop in the nerves which run to the eye. The oculist should look upon the patient presenting symptoms of ocular syphilis as a candidate for future severe involvement of the central nervous system. When the patient denies the possibility of lues and when the blood Wassermann is negative, then a spinal fluid examination is indicated, for many will show increased cell count, increased globulin, a positive Wassermann reaction, or a variation from the normal in the colloidal gold curve reaction of Lange.

These patients consult the specialist chiefly because of a defect in vision, headaches, an erosion within the nose or throat, or because of ulceration, or because a post-operative wound will not heal. It is not enough for the patient to be given sufficient treatment in order to clear up these defects. If the specialist does not care to handle the case further, then he should recommend a competent physician.

## BLOOD CHEMISTRY

Newer methods in the determination of the chemistry of the blood may be of value in disclosing factors causing diseases of the special senses. In reality these determinations should be made with the patient upon a strict diet, otherwise quantitative determinations have little value. Table number four will show a limited number of determinations made upon patients in a routine office practice. Preferably they should be made before breakfast but since this is not always

possible we are forced to do as best we can, for such patients are frequently from out of town and cannot afford to remain over for elaborate studies. My own experience would tend to show that routine blood sugar examinations alone are necessary. When the uric acid and creatinine values are high the patient is the subject of faulty metabolism; he should be carefully examined as to his general condition, especially as to the heart and kidney functions.

Recent observations would lead me to believe that glycosuria and hyperglycemia are of common occurrence and do not necessarily mean diabetes mellitus. When sugar is found in the urine by the fermentation test, then the patient's tolerance for carbohydrate should be determined by feeding him known amounts of these, and making quantitative determinations of the blood and urine, for only in this way can we advise a safe diet. Some of the patients showing sugar in the urine or high blood sugar, are syphilitic, and not infrequently are suffering from syphilis of the central nervous system. With these findings a spinal fluid examination should be made. This observation was made after finding the blood sugar higher in a syphilitic two days after salvarsan administration. The patient's sugar tolerance was normal, but still sugar would occasionally appear in the urine. The blood Wassermann was negative but the spinal fluid showed a positive Wassermann reaction, increased globulin and cells, and an abnormal colloidal gold curve reaction. Possibly we can account for this by assuming a diseased process about the sugar regulating center in the brain.

TABLE IV

Mgm. per 100 c. c. Blood

Diagnosis	Uric acid	Creatinine	Percent. sugar
Chronic nephritis .....	3.0	0.9	0.07
Chronic nephritis .....	4.5	1.4	0.08
Headaches .....	2.75	1.2	0.10
Cataract .....	2.35	1.14	0.08
Cataract .....	1.00	1.00	0.085
Abducens paralysis .....	1.50	1.40	0.08
Oculo-motor paralysis .....	.....	.....	0.05
Optic atrophy .....	0.9	.....	0.05
Furunculosis .....	.....	.....	0.06
Furunculosis .....	.....	.....	0.065
Furunculosis .....	.....	.....	0.08
Hyperglycemia .....	.....	.....	0.012
Hyperglycemia .....	.....	.....	0.16
Hyperglycemia .....	.....	.....	0.15

Normal findings: 0.06 to 0.12 per cent. sugar; 1 to 3 mgms. uric acid; 1 mgm. creatinine to 100 c.c. blood.

## REACTIONS FOR TUBERCULOSIS

The complement fixation test for tuberculosis is still in the experimental stage, because a satisfactory antigen for all purposes has not been prepared. Results would seem encouraging, however. I have found the simple intradermic test using old tuberculin more satisfactory than the

cutaneous test. The skin is cleansed, washed with alcohol, dried, and a drop of old tuberculin placed upon it, and 2 to 3 sticks made through the drop-let using a small sterile steel sewing needle for the purpose. The excess of tuberculin is wiped off at once, and no time is lost by waiting for the tuberculin to dry, as in the von Pirquet test. It must be remembered that a positive intradermic test does not mean that tuberculosis is causing a given eye, ear, nose or throat condition. It means that the patient has a focus somewhere in the body; it may be located in remote glands.

#### ABDERHALDEN REACTION FOR MALIGNANCY

The only test of the blood serum for malignancy which has been tried extensively is that known as the Abderhalden serum reaction for malignancy. It is dependent upon the presence of ferments in the blood serum. The technique is quite difficult and unless great care is taken in the whole procedure, false positive reactions are obtained.

#### ILLUSTRATIVE CASES

Case 1. A young girl whose condition was diagnosed clinically as sarcoma of the brain and optic nerve, gave a distinctly positive reaction using a prepared carcinoma of the parotid gland as a substrate.

Case 2. A man suffering from a gumma of the pharynx failed to give a reaction for malignancy using two different carcinomatous tissues as substrates.

Case 3. A young lady suspected of having a tumor of the eye-ball gave a negative reaction for malignancy two years ago, she is alive and well today.

Case 4. A woman operated upon for an hypophyseal tumor, showed a positive reaction using hypophysis tissue, and a negative reaction using cerebral tissue. She improved as a result of a decompression operation.

#### BLOOD TRANSFUSIONS

The need for blood transfusions in diseases of the eye, ear, nose and throat, is only occasional in private practice. The citrate method is a safe one and is destined for general use. In so far as serological tests of the blood of donor and recipient are necessary before the transfusion is attempted, when a member of another family is used as a donor, the simplified transfusion operation is often performed by the clinical serologist.

Of 24 patients transfused only 6 had hemorrhages from the mouth or nose, or into the orbit. Of the six, four were cases occurring in the newborn, all of which recovered. A patient suffering from purpura hemorrhagica was not improved. The sixth case was one of epistaxis occurring in a patient dying from secondary anemia following ectopic gestation. While the transfusion was being performed the patient became conscious of her surroundings, improved, and was able to return home in one month's time.

In acute bacteriemia and septicemia blood transfusion has not been of much benefit. In the

severer grades of chronic anæmia, the improvement may be temporary, and succeed in tiding the patient over a critical period. In the acute hemorrhages following an operative procedure about the head, and those occurring as a complication to some general diseases, the simplified operation of transfusion has come to stay and will be resorted to more frequently in the future.

19 WEST SEVENTH ST.

#### DISCUSSION

DR. THOMAS RAMSEY (Toledo): Dr. Berghausen has covered a very large field in taking up diagnosis from the serological and laboratory standpoint.

The necessity for calling in consultation the serologist or pathologist in diseases of the eye, ear, nose and throat in obscure conditions is very important, especially where there is a possibility of luetic infection, probably congenital, or where no positive history of lues can be obtained.

The Wassermann reaction on the blood in hereditary lues doesn't give as high a number of positives as the spinal fluid.

Therefore, the importance of making a lumbar puncture should be remembered. It is pretty hard to get the family to consent to the making of a lumbar puncture, but these cases require that one be made.

In conditions of tertiary syphilis and hypertension, there should always be a Wassermann made, to rule out the possibility of lues.

DR. THOMAS M. STEWART (Cincinnati): I only want to mention a case in connection with this line of work. Dr. Berghausen will probably recall it. She didn't show any apparent muscle deviation, but she had twenty degrees of diplopia, under the test. I couldn't get any history, and I sent the young woman to Dr. Berghausen for this examination, and the improvement that came from that first injection of salvarsan was very remarkable. I didn't look the case up before I came here, but I think the improvement was over one half. Other injections were given and we carried that case through to a successful termination of the diplopia and a very much better condition of the patient.

DR. OSCAR BERGHAUSEN (closing): It is not necessary for me to add to the points which I have brought out in the paper. Personally, I consider this field a part of clinical medicine, and I think a man should be consulted as a clinician and he can adopt whatever means he thinks is necessary to help the specialist in making the diagnosis. In many of these cases I found positive reactions, in one test or the other, but lues was never suspected; it was merely by going over them carefully clinically, using whatever means might be necessary, special methods, making polygraphic traces, if necessary, to determine what damage is already done to the heart, so that a report can be sent back to the ophthalmologist, in order that he can satisfactorily determine what should be done under all conditions, in all cases.



# Oto-Laryngological Work at the Hospital for Head Surgery, Cape May, New Jersey\*

J. M. Ingersoll, M. D., Cleveland

**Editor's Note.**—The large number of ghastly head and neck wounds during the world war gave specialists ample opportunity to display the prowess of their surgery and to extend their inventive genius to the limit. As these wounds frequently involved areas under the care of different specialists, team work and co-operation were vitally necessary and fortunately developed. Even the oral surgeons were given their opportunities and they too surpassed expectations. It is to be hoped that few of these gruesome wounds will ever again occur as accidents, but if they do, this generation of specialists will know how to handle them. Only a perusal of Dr. Ingersoll's paper can give the reader any conception of the variety of cases handled and the remarkable results that were achieved. In the work of reconstruction one of the most progressive accomplishments was the intensive teaching of lip reading to the deaf.

**I**N January, 1918, the Medical Department of the Army recommended that a modern six story fire proof hotel at Cape May, New Jersey, be leased by our government for hospital purposes. This recommendation was approved by the Secretary of War, and the building was leased to be used as a Hospital for Head Surgery, and was known as the U. S. A. General Hospital, No. 11.

The building was renovated, all carpets and rugs were removed, leaving well laid tile and cement floors throughout the building and the necessary equipment for hospital work began to be delivered at the hospital during February and March. At first the equipment was rather limited. In the Oto-Laryngological department it consisted of the regulation army nose, throat and ear case. This case was a canvas roll and contained the ordinary instruments necessary for making a routine examination of the nose, throat and ears. In addition to this there were also the necessary instruments for doing a tonsil and adenoid operation, and some of the more essential instruments needed for a mastoid operation. As soon as new equipment was secured by the government it was sent to the hospital.

The government had the same difficulty in getting equipment that civilians did, and sometimes some of the equipment came through rather slowly, but they did everything they possibly could to get the equipment to us, and it was reasonably complete.

On April 1, 1918, twenty six ear cases were transferred from the General Hospital, No. 2, to the hospital at Cape May, and from this time the number of patients in the Oto-Laryngological department constantly increased. At first the more difficult cases from the cantonments in this country were sent to the hospital. On July 1, 1918, the first patients from overseas were received. At this time the greater portion of the patients received from the cantonments had been discharged and from July 1st, the number of patients in the Oto-Laryngological department averaged between one hundred and one hundred and fifty.

The total hospital capacity was seven hundred and fifty. We crowded it above that occasionally.

## HANDLING NEW PATIENTS

The hospital was always advised by telegram, usually about twenty four hours in advance, of the time of arrival of new patients, and the number that would be sent. They usually came in groups varying from fifty or sixty to one hundred and fifty, or more, and were sent directly from the port of debarkation to Cape May in a special hospital train, accompanied by a medical man and orderlies enough to take care of the patients. With each train there was also a mess car with its kitchen, and the necessary provisions for feeding the patients.

The incoming patients were all examined immediately upon their arrival at the hospital, and assigned to the different departments, unless there was some suspicion of acute infection or contagious disease. All suspicious cases were sent immediately to isolation cottages and kept under observation until the acute symptoms subsided, or a positive diagnosis of contagious infection was established.

Cultures were made from the throats of all incoming patients, and a few diphtheria carriers were found. These cases almost invariably had enlarged tonsils, and a tonsillectomy usually cleared up the condition. One case of atrophic rhinitis, without enlarged tonsils, continued to show diphtheria bacillus, in the cultures from the throat, for several weeks after admission, but finally gave negative cultures after a daily application of twenty-five per cent. Argylol in the nose and throat.

## DIVISION OF WORK

The work in the hospital was divided into the Section of Brain Surgery, the Ophthalmological Section, the Oto-Laryngological Section, and the Oro-Plastic Section, which included injuries of the jaws and the necessary dental work which naturally accompanied this branch of the work. The work in the different sections, for the most part, could not be divided by any inflexible rule, as the brain injuries almost invariably involved the eye or the nose also, and the other departments all over-lapped in a similar way, so that practically

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association during its 73rd Annual Meeting at Columbus, Ohio, May 6, 1919.



all of the cases in the hospital were seen by two or more of the departments. Fortunately there was good team work between all of the departments, and with this team work the cases were studied in consultation and the various problems worked out. This spirit of cooperation and harmony added much to the general efficiency of the work done, and also to the interest in the work.

Associated with me in the Oto-Laryngological department were the following men: Capt. Gordon Berry, Capt. H. F. Lampe, First Lieut. F. N. Bigelow, First Lieut. E. P. Longaker, First Lieut. H. J. Beard. Capt. H. P. Cahill was also a member of the Oto-Laryngological staff until August 10, when he was assigned to Unit 115, and went over-seas. These men are all capable, well trained men, and our work together was a constant source of pleasure to us all.

#### VARIETY OF CASES SEEN

About eighty per cent. of the cases in the Oto-Laryngological department had some lesion involving the external or middle ear. Eight per cent. of the cases had lesions involving the internal ear. Four per cent. of the cases had traumatic lesions of the nose or accessory sinuses only, and eight per cent. were traumatic lesions of the larynx.

The laryngeal cases were in some respects the most difficult type of case which we had to treat. Some of the cases had been shot through the larynx, or the larynx penetrated by pieces of high explosive shell or shrapnel causing injury and destruction of the cartilage and the intra-laryngeal structures, followed by adhesions and laryngeal strictures necessitating a tracheotomy in nearly every case. Laryngeal fistulas existed in nearly all of these cases when we received them, and these fistulas, like all laryngeal fistulas, failed to heal until all the necrotic tissue was removed and very free drainage established, and even then many of them healed very slowly. The laryngeal obstruction, caused by deformity and adhesions, was also difficult to relieve, but in most cases persistent dilatation enabled us eventually to remove the tracheotomy tube. The voice in practically all of these cases was much impaired, but in no case was it entirely destroyed. Dr. Chevalier Jackson, of Philadelphia, visited the hospital twice and saw these cases with us, and gave us many valuable suggestions as to their treatment. A few of the laryngeal cases consisted of slight wounds along the lateral wall, which did not penetrate the larynx. These cases had an unilateral laryngeal paralysis without other complications.

Many of the men we saw, of course, had rather interesting stories to tell. One officer was hit in the larynx first, used his first aid kit to tie up the injury, and then he went on with the advance. Later he was hit in the arm and lost considerable blood, and lay in the bushes until dusk, intending to go back to the American lines. While he was there, the Huns flanked the position that they had held, and when he got up

in the dark he started, as he supposed, for the American lines. At about two o'clock in the morning he was challenged, replied to the challenge and was challenged a second time. He discovered that the man who had challenged him was a Hun sentinel, and he immediately dropped to the ground. The sentinel fired and was joined by three other sentinels, who searched for him and probably would have found him had not a bombardment begun. By following the direction of Hun shells he reached the American lines about four o'clock in the morning. Here he was challenged again. He was so nearly exhausted that he didn't reply to the challenge, but said, "If this the American line, thank God"—and then fainted.

The injuries to the nose and the accessory sinuses, and the surrounding tissue, varied greatly in extent and character. A number of cases were struck high up on the bridge of the nose by machine gun bullets and the nasal bridge was either destroyed, or dislocated. In one of these cases both eyes were lost. In several cases only one eye was lost, and in a few cases neither eye suffered materially.

In several cases machine gun bullets passed through one eye, and the nose and mouth and out through the side of the neck. These injuries were all received in air raids, while the men were lying on the ground looking upwards.

Pieces of high explosive shell and shrapnel were found in nearly all conceivable places in the face; more frequently in the maxillary sinuses than in any other one place. Such cases invariably recovered very promptly as soon as the foreign body was removed. Practically all of the operations on the maxillary sinuses were done through the canine fossa. In many of these cases a fistula through the cheek persisted until the foreign body was removed. After the fistula healed, the scar was dissected out and the deformity corrected by a plastic operation.

The Oro-Plastic Section, in a general way, had supervision over the plastic work, but the plastic operations on the eyes and surrounding tissues were done with the cooperation of the Ophthalmological Section; those involving the mouth and jaws with the Dental Department and those involving the nose and ears with the Oto-Laryngological Section, so that all the Sections had the opportunity of doing plastic work in their own department.

We had a wonderfully capable Dental Department, and it was a revelation to the surgical men there to see what the dental men did in the cases of injury of the jaws.

The traumatic injuries of the ears were practically all of them caused by fragments of shrapnel or high explosive shell. In a few cases the injury was confined to the soft tissues alone, and resulted in a stenosis of the auditory canal externally which was easily relieved by a plastic

operation. In the majority of these injuries of the ears, however, the shell fragments penetrated the mastoid cells and crushed and fractured the facial canal almost invariably causing facial paralysis, and total deafness in the injured ear. Most of these cases of traumatic facial paralysis, were much improved, or practically cured by the removal of the shell fragments, and the pieces of fractured bone along the course of the facial nerve. The loss of hearing was permanent. Practically all of the deformities of the ear were remedied by plastic operations.

All cases of deafness in the American Expeditionary Forces were sent to Hospital No. 11. The total number of cases of bilateral deafness received at the hospital up to March 1919, was one hundred and six. About thirty per cent. of these were cases of concussion deafness from shell explosions. Two per cent. were due to cerebro-spinal meningitis. The other cases were due to chronic bilateral suppuration. The cases of deafness due to meningitis were complete, and showed no improvement while they were under treatment. Nearly all of the cases of concussion deafness improved somewhat, so that they were able to hear a loud voice from one to four feet. This enabled the men to hear their own voice, and so modulate it in speaking, and avoid the monotone which is so noticeable in cases of congenital deafness.

Various methods of treatment were used in the cases of chronic suppuration. Many of these suppurative ears healed under daily treatment with Dichloramine T, applied in the ear on a little pledget of cotton after careful cleansing with cotton. In a few cases it was necessary to do a radical mastoid operation, and we also had a few cases of acute mastoid infections, necessitating an immediate operation, but considering the number of patients treated comparatively few mastoid operations were done.

Our general policy in regard to radical mastoid operations was not to operate on a mastoid in which there had been suppuration before a man went into service. If the condition developed in service, then we operated whenever it was necessary.

All of the deaf patients were given instructions in lip reading. The section of Defects of Hearing and Speech was a part of the reconstruction division of the army, and was under the direction of Col. Chas. W. Richardson of Washington. Col. Richardson secured for this work ten of the most capable lip reading teachers that could be found in this country. The deaf men were given individual instruction in lip reading, beginning with a period of forty-five minutes daily, then increasing the period; so that each man met his teacher for a period of forty-five minutes two or three times a day. Under this system of concentrated teaching the majority of the men made remarkable progress, and in from six to eight weeks many of them became very proficient

lip readers, and were able to carry on a conversation practically as well as if they could hear.

The skill which some of these men acquired in lip reading was remarkable. Many of them were illiterate men, some of our very good lip readers were illiterate negroes, and at first we wondered why they learned lip reading so quickly. We all came to the conclusion that it was partly because the negroes as a class are rather childish and they are also very imitative. Thus they learned it just as a child learns a new language.

The members of the staff at the Hospital for Head Surgery were an exceptionally fine lot of men, and the hearty spirit of cooperation between the different departments and the unusual character of the work made the service one of great pleasure and interest for all of the men connected with the hospital.

OSBORN BLDG. DISCUSSION

DR. THOMPSON (Cincinnati): I think we are justified occasionally in throwing bouquets at ourselves, because no department of medicine has made more rapid advance than the oto-laryngological, in the time that I have been practicing it.

While the doctor was reading his paper, I recalled one case that wandered into the old Presbyterian Hospital thirty-five years after the Civil War was over—a man who had been shot through the neck by a Minie ball, the ball entering on the left side and coming out through the right shoulder on the opposite side; and for all those thirty-five years he had been living on liquids and was unable to swallow at all. A careful study of the case convinced me that the stricture of the esophagus was causing the trouble. So I dilated the stricture very easily, and for all the remaining years of that man's life, he could swallow ordinary food, such as any one takes.

Now, if we had had any such service following the Civil War, this man would have been saved many years of misery.

DR. J. M. INGERSOLL (Cleveland): Mr. Chairman, may I suggest to the men here that Dr. Snyder say something about Hospital No. 11? Dr. Snyder was good enough to come down and spend a few days with us there and saw some of the work. He can tell you much more about the eye work than I can, because I don't do any eye work at all. He saw some of the eye cases there.

DR. WALTER H. SNYDER (Toledo): It was extremely interesting to me, and I think it would be interesting to you to know what difficulties the ophthalmologists labored under with regard to the eye work.

I agree with Dr. Ingersoll that the dental work was magnificent—it was wonderful! When you take into consideration the fact that almost every French case, every case that had been treated in the French hospitals, according to our practice, had the splints taken off too soon, which resulted in a friction of the parts and often loss of the central incisors, and these cases came in there



in very poor condition, some of them emaciated from a rough voyage during the winter, with possibly not as much attention as they got later, the work done was remarkable. They were rapidly fed up, and then the work started. I think the hardest work of all was done in those cases where the whole roof of the mouth was gone—there were a good many of them—and where it was necessary first to get the man in good physical condition, so that he could be operated upon. Then, these cases had to be washed out after every meal, and it was simply a tremendous job.

They had some very ingenious things, which they invented for holding the dentures. In some of the cases, the entire roof of the mouth had been taken out, and it was really remarkable to see how successfully they had treated some of those cases. There were one or two of them in which I was especially interested, and these men were almost unrecognizable. After this work was done, you could compare the present condition of the men with the pictures which they had had sent from their homes, and I felt proud that the Americans could do such splendid work.

I was surprised at the number of chronic mastoids that Dr. Ingersoll had in his clinic there. I was on the Medical Advisory Board for our district, and I never permitted a chronic mastoid, or even a discharging ear, even a mild so-called dry type, to go into service, but somebody let a great many of them pass, and I imagine probably it was the Draft Board, which did not see the significance of it. There seemed to be a great many of those.

I think the eye men had about the hardest task of it in their work, for this reason: of course, the eye was gone in many of these cases, there was no question about that; but the trouble seemed to be that in the great hurry of simply stopping the blood flow, after one of these big offensives, when the men were coming through the base hospitals with the dressings every few minutes, they just took a mass of gauze and put it over the eyeball and bandaged it tightly, to stop hemorrhage. That resulted in a most ingeniously devilish and terrible cicatricial contraction that you can imagine. After that had been done, you can imagine what it was necessary to do in order to obtain a resting place for an artificial eye. This eye work had only partially started. Major Chance had just left and the young man who was in charge there was receiving a great many cases and was not doing very much operating. As the doctor says, there were very few blinded patients there, it being the general idea of the Medical Service that the blinded men were to go at once to Evergreen, just outside of Baltimore, but there were a few at this place—think I saw one or two—who first had to have plastic work done before they were sent there, and it was extremely interesting to see the pluck of these fellows and how little they complained about it. It has occurred to me re-

cently how much better men stand pain than they used to even a few years ago. For instance, a man will come in with a little foreign body in his eye and he whines about it, and that set me to wondering how these men who were really hurt would feel about it, and it certainly was remarkable how little they said about it; they were making the best of it. I felt very proud that Dr. Ingersoll, a member of our Section, had done so much good down there, because there was a general feeling that that department was well handled—and indeed it was—but to me it was the most difficult, with the possible exception of the dental. To sit there hour after hour, as Dr. Ingersoll and his associates did, and dry-clean those ears was very trying, it was tedious work. I should like to have done some of the eye work, but I should not have cared to do any of that work, because it was slow, laborious work, and the results are really coming through very successfully.

I am glad the doctor asked about the dichloramine-T, because I think that its use was a distinct advance that was worked out, and I am going to ask Dr. Ingersoll to tell us about it in detail because it seemed to me those cases under it kept sweet and clean better than any that I know of.

DR. R. D. GIBSON (Youngstown): I merely want to refer to the reason why the negroes who were illiterate learned lip reading faster than the educated man. To my mind the reason for that was that the ignorant man had so little to think about; therefore he remembered better. The Indian, the savage, always remembers incidents better than the educated man. Therefore, the illiterate negro learned lip reading better than the man who had his mind taken up with reading, and this, that and the other thing.

DR. HART (Wooster): I have had no professional experience with cases of this kind, but the latter part of the Civil War I remember a case of a country boy who was shot, and he had his right eye taken out and his nasal bone on one side was cut, thereby disfiguring him. The treatment which he received was very crude, but he was a clean-blooded fellow and I saw him after he was well, wearing an artificial eye, and, as I said, he was horribly disfigured, but at the same time he was well.

Another case was that of a member of the First Pennsylvania Cavalry, who was shot through the neck, and the bullet cut the esophagus, so that when he attempted to drink water, the water ran out of both holes in the neck. I saw him when he was perfectly well also. There was no stricture. I don't know how much damage was done, because I wasn't a doctor then, I was only a private soldier.

DR. J. M. INGERSOLL (closing): The dichloramine-T, we used in a one or two per cent. solution. Some patients tolerated it better than others, and we used it in so mild solution that it would not be very irritating. The ears were



carefully dried out with little pledgets of cotton and the dichloramine. That was practically the only treatment, the first time that we received them, perhaps. If there was a good deal of suppuration we cleaned them more frequently, but the mild cases we only cleaned twice a day with pledgets of cotton, and after

the cleaning in the morning a pledget of cotton was dipped in the dichloramine-T and inserted in the ear. That worked better than any one thing we could use. Like all suppurative ears, they didn't all respond to that treatment, of course. Sometimes a case would apparently clear up somewhat better under an oil solution.

## The Results of Routine Wassermann Tests in Children\*

C. L. Spohr, M. D., Columbus

Editor's Note.—Laboratory records are affording an interesting index of the prevalence of syphilis. Dr. Spohr, for sometime past, working in the department of pathology of the Ohio State University, has been using the Craig Modification of the Wassermann test to determine the incidence of syphilis in several thousands of patients, at the Children's Hospital, Columbus. It is difficult to verify the diagnosis of congenital syphilis except by routine tests. The statistics resulting from Dr. Spohr's investigation show that in hospitals and dispensaries about ten per cent. of children give positive reactions to the Wassermann test. Clinical symptoms vary considerably. It is interesting to know that only in one child of a series was the disease acquired after birth.

"IT is noteworthy," says Nichols, "that medicine is indebted to laboratory workers and research institutions and not to practical syphilographers for the phenomenal progress that has been made in diagnosis, treatment and prognosis in leutic disease. Laboratory records have afforded an index of the amount of syphilis among the population. The results of the treatment can be more carefully followed. We now know that the percentage of relapses is very high, but it is to be remembered that not all relapses are of the clinical type, many cases showing no other symptoms except the return of a positive Wassermann. The establishment of a standard cure as yet not accomplished, has undergone considerable modification and further changes are perhaps still to be expected."

### DRAFT STATISTICS

Vedder of the U. S. Medical Corps, *War Department Bulletin*, No. 8, June, 1915, gives the following figures as to the prevalence of syphilis in the U. S. A., these results being based upon the results of routine Wassermann tests made upon recruits, cadets, and enlisted men both white and colored.

Of the recruits 16.77 per cent. were syphilitic at the time they entered the service. Of enlisted men, 16.08 per cent. of white and 36 per cent. of colored enlisted men probably syphilitic, while a Porto Rican regiment gave 55.93 per cent. of infection. He estimates that about 20 per cent. of the young adult male population of the class from which the army is recruited, are infected with syphilis.

### VALUE OF THE WASSERMANN TEST AND ITS MODIFICATIONS

The Wassermann Reaction introduced by Wassermann and Bruch in 1906 and which has since that time undergone a number of modifications can at the present day be considered as one of the, if not the most valuable method of labora-

tory diagnosis at present in use. While it has its limitations and is subject to individual errors in technique, a carefully conducted Wassermann reaction often yields information in no other way obtainable. This test has been made use of in the Laboratories of Clinical Pathology of the Ohio State University since 1909, but during the last three years, an attempt was made to run routine Wassermans as far as possible on all ward patients admitted. The system employed during the past three years was that used in the U. S. Army known as the Craig modification and which system utilizes human corpuscles and cholestrinized human heart antigen. Daily titrations of *complement* and *amboceptor* were made before each test and the readings were recorded as *two plus* signifying complete inhibition of hemolysis, and *one plus*, signifying between 50 and 100 per cent. inhibition. Less than 50 per cent. inhibition was recorded as *plus-minus*, and no inhibition was recorded as negative.

As to the interpretation of these readings, a double plus reaction is usually sufficient to diagnose the presence of syphilis whether there are symptoms present or not and even in the absence of a history of infection. With a history of infection or the presence of clinical symptoms a one plus reaction is indicative of syphilis. A single negative is of no value in absolutely excluding infection. Of course the final diagnosis should rest with the clinician.

Amongst others there were received 1,840 serums from the Childrens' Hospital, and a more detailed analysis of the findings are tabulated.

### CONGENITAL SYPHILIS

Syphilis has a wider variety of interest than any other disease. It is a disease strictly of of man and is one of the most important diseases that afflict him. It has the tragic human interest of being hereditary, a disease that may be transmitted from parent to child. Its manifestations are so varied that its study is one of interest in every branch of medicine. It is inextricably in-

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association during its 73rd Annual Meeting at Columbus, Ohio, May 7, 1919.

volved in the great unsolved problem of modern civilization, the problem of the relation of sexes.

Hereditary or congenital syphilis is transmitted to the fetus in utero and, excepting the initial lesion, may produce any of the manifestations of the acquired disease. It may become active during fetal life or manifestations may appear after birth. Children which survive early hereditary or congenital syphilis may later show very little traces of the disease. Usually they are below normal, showing disturbances of nutrition and development. The disease may not make its initial appearance until the eighth or tenth year, syphilis hereditaria tarda.

A proportion of hereditary syphilitics may live to escape any save mild symptoms, yet the mortality of this form is high. Pusey says that only 25 to 30 per cent. survive the first year.

#### PREVALENCE OF SYPHILIS

Syphilis is more frequent among men than among women. Estimates of the ratio vary from 1 in 3 to 1 in 10, the former figures being more nearly correct. The per cent. of figures of syphilis in the adult male population vary among different authorities. Berlin 12 per cent., London 12 per cent., Paris 15 per cent. The American Army survey has already been given. The percentage is higher in public practice than in private and higher in dispensary and hospital ward service than in private hospital service. If 20 per cent. of adult males of the United States are syphilitic and the ratio for women were 1 to 5, then 4 per cent. of adult women would be so afflicted.

What per cent. of the new-borns will have syphilis?

It is impossible to arrive at any definite estimate of the prevalence of hereditary syphilis. Vas found in the children's clinic at Budapest among 106,000 child patients, 720 showing clinical signs of congenital syphilis, 0.66 per cent. With the introduction of the Wassermann reaction, much higher percentages resulted. A review of the literature of the Wassermann reaction in cases of hereditary syphilis yields the following figures:

Epstein at Prague, 33 per cent. of 236 new-born infants.

Blackfan, Nicholson and White, 2 per cent. of 101 patients.

Holt, 6 per cent. of 178 hospital children.

Elliott of Glasgow, 10 per cent. of 130 children.

Childrens' Clinic at Prague of 2,533 infants 5.7 per cent. were syphilitic.

Whitney from a San Francisco Hospital 2.9 per cent. of 915 children.

Churchill and Austin at Childrens' Memorial Hospital in Chicago, 3.3 per cent. of 695 cases.

In September, 1916, the routine Wassermann test was introduced at the Childrens' Hospital at Columbus, Ohio, and up to May 1, 1919, eighteen hundred and forty (1,840) specimens from chil-

dren were examined. In all cases attempts (frequently futile) were made to obtain parental histories and in some cases it was possible to corroborate our findings by Wassermann tests in parents. Usually, however, syphilitic infection is denied by parents or only vague statements are elicited.

It is not our object at this time to submit detailed tables and data of the age, sex, color and disease for which these patients were admitted but to show the frequency of positive findings.

Total number of routine Wassermann tests 1,840.

Two (2) plus 95, or 5.16 per cent., of which 73 showed clinical symptoms.

One (1) plus 78, or 4.23 per cent., of which 24 showed clinical symptoms.

Total positives 9.39 per cent.

Negatives 1,667, or 90.61 per cent.

In only one of the cases was the disease acquired after birth, showing the preponderance of hereditary syphilis in children under 15 years of age.

The serums and histories of these patients were furnished by Miss Atkinson, Superintendent of the Childrens' Hospital, to whom we wish to extend our thanks for her cooperation.

OHIO STATE UNIVERSITY.

#### New and Non-Official Remedies

*Barbital Sodium-Abbott.*—A brand of barbital sodium which complies with the New and Non-official Remedies standards. Barbital sodium is the soluble sodium salt of barbital (veronal). Barbital sodium was first introduced as veronal sodium and medinal. For a discussion of the action, uses and dosage of barbital sodium see New and Nonofficial Remedies, 1919, p. 83. The Abbott Laboratories, Chicago.

*Ovarian Substance-Hollister-Wilson.*—The entire fresh ovary (including the corpora lutea) of the hog, cleaned, freed from fat, dried and powdered. It contains no diluent or preservative. For a discussion of the actions and uses of ovary preparations, see New and Nonofficial Remedies, 1919, p. 202. The dose is from 0.06 to 0.2 Gm. (1 to 3 grains). The Hollister-Wilson Laboratories, Chicago.

*B. Coli Bacterin (Special Bacterial Vaccine No. 12).*—A colon bacillus vaccine (see New and Nonofficial Remedies, 1919, p. 283), marketed in 10-Cc. vials, each cubic centimeter containing 5,000 million killed *Bacillus coli*. Fred I. Lackenbach, San Francisco.

*Sodium Dioxide, Dental-R. and H.*—A brand of sodium peroxide complying with the New and Nonofficial Remedies standards, but containing at least 90 per cent. of sodium peroxide, and iron not to exceed 0.006 per cent. For a discussion of the actions and uses of sodium peroxide, see New and Nonofficial Remedies, 1919, p. 216. Roessler and Hasslacher Chemical Co., New York (Jour. A. M. A., Aug. 23, 1919, p. 607).



## Enlarged Thymus--Symptoms and Treatment\*

Ernest R. Brooks, M. D., Cleveland

**Editor's Note.**—Fortunately instances of enlarged thymus are comparatively of rare occurrence. While its function is still a much disputed question, its morbidity is such as to demand a great deal of consideration. Only those who have seen the actual thymic paroxysm or who have witnessed thymic death under anesthesia, can realize the importance of diagnosing the presence of an enlarged thymus before it becomes a menace to life. This diagnosis can be made, according to Dr. Brooks, by the usual symptoms that present as well as by the "threshold method of percussion." X-rays properly taken will also reveal the condition. Sudden death in these cases appears to be due as much to mechanical pressure as to anything else. Operative procedures for relief are attended by high mortality. Friedlander and his followers have found X-ray treatment to give the most gratifying results. Dr. Brooks details two interesting cases coming under his own observation.

**T**HE thymus gland lies under the upper part of the sternum, just above the heart and at birth weights from six to seven grams. From birth to five years the gland averages about four grams and after sexual maturity, according to Hammar, the gland is replaced by fat and connective tissue, its activity normally ceasing or becoming very much less. Any weight over ten grams at birth should be considered pathological.

The antero-posterior diameter of the superior opening of the thorax, the space occupied by the thymus gland, measures two to three centimeters, and is called the "Critical Space of Gratz."

### FUNCTION OF THE THYMUS

The function of the thymus gland is still a much disputed question, many careful observers taking very diverse views of its use and manner of affecting the human organism.

Klose and Vogt found in a series of experiments, on 25 dogs, that removal of the thymus gland had the following results: After a period of about two weeks the animals became sluggish, the skin soft and spongy and the bones more easily bent, apparently becoming deficient in calcium. The animals gradually lost weight and died.

Friedleben, Langerhaus, and others on the other hand were unable to observe any change in the development of the animals from which the thymus had been removed.

Park claims the resulting poor condition of the operated animals was due to their unhygienic sanitary surroundings in the kennels.

Klose and Vogt also claimed that the total removal of the thymus in the young resulted in rachitis, while in adults it was followed by osteoporosis and steno-malacia.

They, along with Matti, think the thymus is an organ of internal secretion, while Sajous disputes this. He claims it supplies the excess of nucleins needed by the body for the osseous, nervous and genital systems, and also helps form the nucleus of the leucocytes. One set of observers claim the thymus has an inhibitory action on the thyroid, spleen, pancreas and adrenals, while other very good men observed no pathological

change following its removal nor any retardation of development.

Garre, Capel and MacKenzine have all observed post-mortem, a large number of enlarged thymus glands associated with fatal cases of exophthalmic goitre.

It has been thought by some that an absent or inactive thymus is almost always found in mentally deficient children, and is the cause of the defectiveness. Feeding of the gland in these cases, however, has not had encouraging results.

During an acute infection, the gland undergoes a pathological involution with a subsequent return to the normal after the acute disease has passed.

In chronic, diseases, however, the gland does not return to normal, but undergoes a permanent degeneration.

The thymus is found enlarged in the condition known as "status lymphaticus" but enlarged thymus is also a clinical entity unassociated with hyperplasia of the lymphatic tissues of the rest of the body.

### DIAGNOSIS

The diagnosis of enlarged thymus is often quite difficult and is no doubt met with much oftener than it is recognized. Three means are at our disposal to aid us in making the diagnosis. First, we have the objective symptoms present. Usually a well nourished child is seen, which gives a history of difficulty in breathing, a condition which may be constant or may come on in paroxysms, especially during a crying spell or fit of anger.

There is an inspiratory stridor and also some expiratory difficulty in breathing, the head is held back, although this only aggravates the trouble, and there is usually more or less cyanosis present.

Retraction of the episternal notch and also the epigastrium is observed, indicating apparently a mechanical obstruction. The cry is rather hoarse and in severe cases the child presents a very alarming appearance. There is often a history of convulsions following the attacks of dyspnoea.

On percussion, usually slight dullness can be detected, extending either to the right or left of the sternum, but often nothing can be ascertained by the most careful percussion.

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association during its 73rd Annual Meeting at Columbus, Ohio, May 6, 1919.



The best method of percussion is that called by Sylvester and others the "Threshold Method of Percussion." The child is placed in its mother's lap on its back. Percussion is begun well out in the chest with such light strokes, that when the ear is within a few inches of the area under percussion, only the faintest possible resonance is heard. When sounds disappear, dullness begins. This may be confirmed by the sense of tactile resistance.

The lower border is difficult to outline as it shades into the heart dullness but it is not essential, for purposes of diagnosis that this border be ascertained.

The X-ray is our most valuable means of diagnosis of an enlarged thymus, but here again extreme care must be taken in getting our picture, as a slight tilting of the chest to one side or the other, will disarrange the mediastinal organs blurring the edges of the plate and preventing a proper interpretation of the shadows. The technique followed by Dr. Lange has given very good results. He lays the child flat on its back, being careful that there is no lateral tilting. With a soft tube, a very short exposure is made, as one over 1/30 of a second is almost sure to have the edges so blurred as to be of no value.

#### CAUSE OF SUDDEN DEATH

When we seek to ascertain the cause of the sudden death of apparently very healthy children, and of the new born child, we again meet a diversity of opinion.

Herrick, Mackenzie and others believe sudden death is caused in these cases by the mechanical pressure on the trachea, vessels or nerves in the neck, of an enlarged thymus, which is suddenly engorged with blood, this either directly shutting off the respiration or affecting the heart action by pressure on its nerve control. Because of the narrow space in which the thymus lies, the above mentioned "Critical Space of Grawitz," this explanation seems a reasonable one. Post-mortem examination of a case of sudden death observed by Herrick, showed a greatly enlarged thymus pressing directly on the auricle.

The fact that thymectomy has caused improvement and cure in thymic asthma, would tend to bear out the truth of the theory held by these men, that the interference is a mechanical one.

Paultauf, in 1889, however, advanced the theory that it was not a mechanical interference with respiration, but a vegetative disturbance, affecting the cardio vascular system.

Hammar has apparently disproved the mechanical idea of sudden death from an enlarged thymus, as he has shown in a number of autopsies performed on children, dying suddenly with no apparent cause, that their thymus glands differed neither macroscopically nor microscopically, from the glands of an equal number of normal children, dying from known causes.

I think, however, that the thymus gland at

autopsy may differ very materially from a slightly enlarged thymus engorged with blood, during a fit of crying or anger. One of the cases observed in J. E. Benjamin's series would tend to prove this fact, as he states that the picture obtained while the child was quiet or sleeping, showed a very much smaller gland than that taken during a spell of crying.

#### TREATMENT

Different methods of treatment of an enlarged thymus causing symptoms have been tried. At first thymopexy was used with very poor results. Intubation did no good, as the point of compression was below the reach of the tube.

Thymectomy gave great relief in a number of cases, with a mortality of about 11 per cent. but the operation was a serious one and advised only in severe cases.

Friedlander was the first one to treat this condition by the use of X-ray and the results in many cases have been nothing short of marvelous. At first, difficulty was encountered in regulating dosage, because of the limited knowledge of the use of the X-ray, but at the present time, the dosage can be accurately estimated and the results are most gratifying. Improvement in the most alarming cases is often obtained in from eighteen to forty-eight hours, with sometimes almost total abatement of symptoms which have existed for months.

The treatments in the average case are given at intervals of a week, and from three to six treatments given, the child being kept under observation and brought in later for subsequent exposures, if necessary.

In urgent cases, full doses should be given, repeated in three or four days, the child being kept under close observation, so that the unfortunate accident of sudden death during the treatment may not occur.

In cases of asthma in which no enlargement of the gland can be demonstrated, the therapeutic test of X-ray treatment should be given and a most gratifying result will very often be obtained.

Organotherapy has been tried with very poor results as we know so little about the functions of the gland.

Among the cases which have come under my observation, two will serve to illustrate different types of cases met with, in this condition, although we may have milder types of cases between these two.

Case 1. Baby B. Age 3 months. Breast fed, well nourished. Since birth has been cyanotic, with intense dyspnoë, inspiratory and expiratory stridor, head held back and a hoarse, asthmatic cough. Examination of chest shows both lungs filled with dry rales and a very long drawn-out inspiration and expiration. Mother says child cannot sleep lying down and at times the symptoms would become so alarming, especially during a crying spell, that it seemed as if the child would die at once.

Percussion over the thymus showed slight dullness to right of sternum.

X-ray confirmed the diagnosis of enlarged thymus and a treatment was given at the same time the picture was taken. The parents who lived about 20 miles from Cleveland were told to return in four days but did not return for one week.

The baby at this time was breathing comfortably, no cyanosis present and could sleep lying down, all the symptoms being markedly improved. Another treatment was given with instructions to return in one week. They did not return for any more treatments and as they have not been heard from since, the child apparently had no further trouble.

Case 2. Baby F., also breast fed; 2 months old, well nourished, nothing abnormal noted until the child was three weeks old when it had a series of slight convulsions with some cyanosis and subsequently had a rise in temperature for several days. No doctor was called as the child began to improve and rapidly became normal. She was apparently in perfect health until she was 5 months old when the attacks occurred in which I saw her. When first seen the child had a temperature of 104°, seemed in intense pain and at intervals of 15 minutes to one hour would take a short convulsion, become blue, the heart practically stop beating, the child becoming pale and apparently dead. With external stimulation, atropine hypodermically, mustard baths, hot towels, etc., the heart would gradually begin to pick up in rate, the child becoming very red and would start crying again. This condition lasted for about six hours and gradually passed away.

After running a temperature for several days it returned to normal and the child was apparently well. A diagnosis of enlarged thymus was made which was confirmed by X-ray and treatment given with no return of the above noted symptoms after five months.

#### CONCLUSIONS

1. The function of the thymus gland is still a much disputed question.
2. Whether sudden death in children is caused by mechanical compression of an enlarged thymus or by changed secretions from the glands is still undecided.
3. X-ray is the most valuable method of confirming our diagnosis and our very best method of treating the condition.

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#### Public Health Notes

School health surveys will be carried out in many Ohio counties this winter by local child welfare committees, according to an announcement of the State Health Department. Standard blanks, prepared by the department, will be used in grading schools according to health supervision and sanitary conditions, thus providing a means of accurate comparison between different schools and localities. Facts disclosed by the surveys will be published in statistical form.

—Volunteer supervision by the public health committee of the Woman's City Club and by the civics department of the Cincinnati Woman's Club of mental defectives entering local industries is expected to be the result of plans which are being made by those organizations. Such supervision, it is argued, will assist in bringing about a more permanent placement of defectives in industry after they have left school, and will furnish data upon their efficiency.

—The Cincinnati Anti-Tuberculosis League seized upon the recent baseball fever in that city to get a health message to the people by distributing an attractive circular on health written in baseball language. "You will make a *clean hit* by having yourself examined by a good physician at least twice a year, but you'll be *caught napping at first* by indifference if you fail to follow the doctor's advice", is one of the pertinent sayings in the circular.

—Six army physicians at the Columbus Barracks have been detailed to conduct a vigorous campaign to prevent an epidemic of diseases of the respiratory organs. Daily physical examination of all officers and men has been ordered and strict sanitary regulations governing conditions in sleeping quarters, mess halls, etc., have been placed in effect.

—Dr. E. A. Peterson of Cleveland has taken up his work in Washington as director of the Health Service Department recently created by the American Red Cross to administer its peace time activities in the health field. Dr. Peterson has had wide experience in social and educational work as well as an executive in health work. He served during 1918-19 as a major with the American Red Cross Commission on Tuberculosis to Italy, where he was in charge of the Department of School Hygiene. For the previous eight years he had been director of the Department of School Health in Cleveland.



## The Value of a Public Health Nurse to the Community\*

Helena R. Stewart, Ph. B., R. N., New York

Second Vice-President, National Organization for Public Health Nursing; Former Director, Public Health Nursing Service, Ohio State Department of Health.

Editor's Note.—While under the provisions of the Griswold bill which has been substituted for the Hughes act, the compulsory feature requiring each county to employ at least one public health nurse has been eliminated, it is hoped that the state subsidy provided by the new measure will encourage the various districts to take this step. The standing which the public health nurse has already achieved, the value that is placed on her service to the community and the scope of the future work that lies before her are recognized. Little can be accomplished by official notices, but when they are followed up, persuasively, by public health nurses, competent to make them effective in the homes of a given community, then a great deal can be done to prevent disease, correct defects, adjust conditions of living, sanitation and hygiene; and all this without friction and the least possible expenditure considering the result obtained. The Public Health Nursing Service and its personnel should have the united support of the profession and the individual encouragement of its members.

**F**OR the first time in its history the United States Public Health Service, during the recent war, organized a division of public health nursing and considered the work of the public health nurse one of the essentials to good health administration. *To be considered essential, one must fill a need which no other type of person can fill, or fill as well.* There are certain branches of health work which public health nurses are especially qualified by their experience and training to do—and do better than physicians or sanitary inspectors, and it was this fact which led our government to consider them as essential to modern health administration.

Public health nursing like all other branches of nursing is not a work by itself, but a very necessary complement to the work of others. If physicians and health officials find the nurse's part of the health program essential, so too her success is quite dependent upon their recognition and support.

### HELPFULNESS OF THE PUBLIC HEALTH NURSE

A successful public health nurse reaches so many different groups of people that her opportunities for helpfulness are very great. She comes in touch with women's clubs and other private organizations; with boards of health and boards of education; with life insurance companies and social agencies; with city and county officials and chambers of commerce; with physicians, ministers and teachers. *But best and most useful of all the nurse's opportunities is her welcome in the homes of the people. She gains this welcome through her services in time of sickness, and through her interest in and care of the children of the family. This tangible service can be understood and interpreted in terms of friendliness, so that advice in ways of health is graciously taken.*

"In the control of communicable disease, the public health nurse, who will go to each home, show the mother just how to care for the patient, how to disinfect all discharges, and how to protect herself and the family and neighbors from infection, will be far more effective than hundreds of printed circulars or dozens of inspectors who

tell the precautions but do not actually demonstrate them with their own hands. Moreover, the nurse while she is giving such services often gets bits of information from informal conversation about the personal habits of the family, about recent visitors or trips away from home, and about services being performed by relatives or neighbors; all of which may be of the greatest importance in tracing the source of infection, or preventing its further spread,—items which would seem to the family of too little consequence to tell an inspector."

### THE PUBLIC HEALTH NURSE IN GOVERNMENT VENEREAL DISEASE CLINICS

Forty-four public health nurses were detailed to work under forty medical officers in the twenty-seven government venereal disease clinics established by the United States Public Health Service. Surgeon General Blue says of them: "The work which these nurses performed was of inestimable value. It is not too much to say that without their aid our success in keeping down sickness in the extra-cantonment zones and in making the venereal disease rate in our army lower than that of any other army in modern times could not have been achieved. In continuing our general campaign for health, and this special fight against venereal disease, we depend upon the continued assistance of public health nurses . . . We depend upon the women of the nation not only for understanding and support, but we depend upon them to encourage young women to take up the profession of the public health nurse, and to insist that hospitals provide training for nurses in public health service, including work in venereal diseases. In backing the public health nurse, the women of the nation will be backing one of the most vital agents in the struggle against the diseases which threaten the health and prosperity of all of us, and the very life of our children which is the life of our nation."

### METHODS OF EDUCATING PEOPLE IN THE WAYS OF HEALTH

The foundation of public health protection is the education of the people in ways of health. Some individuals can be reached by magazine articles and addresses, by newspaper talks and

\*Read before the Section on Hygiene and Sanitary Science, during the 73d Annual Session of the Ohio State Medical Association, at Columbus, May 6, 1919.



health leaflets; but thousands read little and think less. One logical place for beginning public health education is the school. A system which gathers in the rich and the poor, the bright and the dull, the healthy and the unhealthy, presents many complications; but the school is a well established institution through which, because of our compulsory laws, most of our citizens must pass. It holds the individual in the years when the mind is receptive and when his chief occupation is to acquire knowledge. The children, assembled as they usually are in school groups of graded ages and mentality, can be reached conveniently and instructed befittingly in matters of hygiene. There is no better place to teach the prevention of tuberculosis. It is often too late to change the established customs of an adult, especially when his education is absolutely completed and he knows everything. During school years not only the child's mind but also his body is passing through a most important period of growth. *Experience has shown that the most effective way of securing correction for the defects revealed by the physician's examination is for the nurse to visit the parents, explain the trouble, and to help them get the remedy. To find a defect means little if the parents are not persuaded to have it corrected, if the child is not taken to the proper place to receive medical care and treatment, and if the educational work in the homes is omitted.*

#### COOPERATION BETWEEN THE MEDICAL INSPECTORS AND SCHOOL NURSES

In the schools of New York City medical inspection of school children was started by employing physicians to examine the children for communicable diseases and to exclude those who showed suspicious symptoms. Thousands of children were sent out of the schools because of infectious eye and skin troubles, but after school hours they played with the same children for whose protection they had been excluded from the class room. *In 1903, of all the written instructions sent to the homes by the medical inspectors, only six percent were carried into effect, whereas eighty-four percent became effective some years later, under the direction of nurses, who interpreted the physicians' directions to the mothers and taught them to give the treatments ordered.* In 1903, there were 57,000 exclusions for minor eye and skin affections, while after the introduction of school nurses the number was reduced to 4,000. The medical inspectors themselves were the first to say that their work without the nursing service was futile.

An English school physician wrote of his work as follows: "When I first commenced my duties as school medical inspector in Wimbledon, it was impossible not to feel exceedingly depressed and hopeless with the work. As a doctor, I felt quite stranded in the strange atmosphere of an elementary school, coming into contact not so much with actual illness as with primary conditions which

produce or foster it; dirt, neglect, improper feeding, malnutrition, insufficient clothing, suppurating ears, defective sight, verminous conditions, the impossibility of getting adequate information from the children, or a knowledge of their home conditions, and nobody to whom one could give directions, or help one in examining the children. The only means of approaching the parents was to send an official notice that such or such a condition required treatment, and it was impossible, besides being outside my duties, to carry on any treatment at the schools. My duties began and ended with endless notifications, and there it all stopped as very little notice was taken of them."

In contrast to the development of school work in a large city, here in our own state, the Ohio Society for the Prevention of Tuberculosis, co-operating with the State Department of Health, is employing a nurse to demonstrate public health nursing in the rural schools of Ohio. In one county she visited 43 schools, gave 65 health talks and examined 517 school children. She found 711 physical defects in these 517 children, and in each instance the parents were notified that the child should be taken to a physician, dentist or eye specialist for diagnosis and treatment.

In writing to me of her work in one rural school, she says in part: "I feel that my work in this township has had results which are already showing. In one room five children whose vision seemed to be defective and whom I referred to eye specialists have already been fitted to glasses. I can't say too much about the children. I love them all. They are so responsive, and I wish you could be around sometime and hear them talk to me and ask questions. At a meeting of the parents and the Village Improvement Society, the subject for discussion was, 'What is the Best Thing for us to do in Our Community?' They decided unanimously that they wanted a school nurse. They came to me from right and left to have me tell about the work and they arranged little meetings of people especially interested in what I am trying to do. I can't tell you how much I am enjoying this work. It does seem worth while when you can see the results forthcoming."

A principal of one of the township schools called up the county superintendent asking if the nurse couldn't stay a little longer. He said that the parents were beginning to realize what it meant and they were "tormenting" him to have their children examined before the nurse left. Some of these very parents had at first objected to her coming.

The following is a part of a letter received from the county superintendent of schools: "Your announced plan to call Miss C—— from our county March 15th, has given me much concern. Since I realize that there are other places with children whose needs are just as urgent, I trust you will not regard this as a selfish move on my part. Our county never had a public school nurse, for

the reason that we never felt the need of one, simply regarding such work as more or less a frill. However, a few boards of education consented to allow us to make a trial this year. Of course, you know what the nurse proposition was in face of the war demands. In fact, we were wholly unable to secure any nurse, properly qualified to succeed, even after the boards had given us permission to proceed. Our only outlook for this year was based on the possibility of your being able to send us someone. You sent us Miss C——, who is succeeding admirably in developing sentiment and will do a great work if she is given sufficient time.

"The attitude in the communities where Miss C—— has been, or is, changes. Interest in other places is developing. The outlook is favorable—more than that. If Miss C—— withdraws March 15th, to go to another county, do you think the total good done in both counties will equal that done in one, where the acceleration developed in a given community becomes a contributing force in starting things in a neighborhood? Then, too, I know that it will not be understood by the communities, if after our saying so much concerning the work, no attention is given them. Pointedly, I believe the rapidity of the health movement in this county is at stake in the too early withdrawal of Miss C——.

"Another matter I wanted to discuss with you was the possibility of our employing Miss C—— next year as our county nurse. I remember of requesting you to send us a lady with a good personality. This you have done. Children love her. Parents become attached to her. She is sensible, devoted to her work, and morally strong. We want her in this county. We would like a proposition from you now so we can work it out."

In the large city the school physician came first and soon proved the need for the school nurse. In the small cities and rural communities the nurse has usually come first and shown the need for the physician, the psychologist, the dentist and the eye specialist, and no system of physical supervision of school children is complete without them all.

#### THE PERMANENT PLACE OF THE SCHOOL NURSE

*"The school nurse is not a passing experiment. She is a vital part of one of the most important of our national institutions. Through her work American citizens are physically fitted to receive the education which in its turn is to fit them for the responsibilities of citizenship. It is her duty to so teach the value of health, both to children and parents as to make them realize that its attainment is worth some real sacrifice on their part; it is her duty to strengthen parental responsibility in new directions. It is her duty to strengthen the hands of teachers and physicians, and also to do her part toward making the American school an institution where bodies as well as brains are developed for a life of usefulness."*

#### BABY AND MOTHER WELFARE

"Nothing reflects good or bad conditions in a community more quickly than the rate at which the babies sicken and die." There is no branch of child welfare which does not directly or indirectly concern the public health nurse. It is she who teaches mothers in their own homes concerning care during pregnancy, the need for medical supervision, and the care, feeding and clothing of babies. She knows of the births in her community and can help in the encouragement of birth registration. If a baby clinic or health center exist in her district, it is the nurse who persuades the mothers to bring their babies, and who in cases of sickness urges medical care instead of the following of the advice of a kind-hearted though ignorant relative or neighbor. No one would think of sending a boy into a profession or a trade without some instruction and preparation, yet most of the young mothers have been sent into their profession of motherhood without any knowledge of the care of an infant or a young child. The high mortality rate of infancy suggests how inadequate is this method of trusting to instinct and the advice of the neighbors. School nurses all over the country are teaching the girls in the higher grades something of the proper care and feeding of infants and simple rules of hygiene and health. The knowledge is immediately useful in families where there are little brothers and sisters at home, and later when these girls are real mothers they will not altogether forget the instructions received, and can take up their responsibilities with more intelligence than that which their parents possessed. *"Visits in the homes, to keep babies well by detecting the first little symptoms of illness, carrying out the physician's orders in the preparation of food, systematic instruction of physician and nurse in well-baby clinics; these save more lives than the most perfectly run baby hospitals."*

#### THE PUBLIC HEALTH NURSE AND THE ANTI-TUBERCULOSIS AND ANTI-CANCER CAMPAIGNS

"The public health nurse in the community may be a very active agent in the movement against tuberculosis. In that movement laws have been enacted, ordinances passed, appropriations made, departments and laboratories established, hospitals, sanatoria and other institutions built and equipped; but before the people are educated to the use of all this, the message of the expert and the scientist must be translated into the simplest terms and taught by patient, painstaking, oft-repeated demonstration." As the treatment lies for the most part with patients themselves and the way they are willing to live for a year or two, the physician will instruct them, but it is the nurse who visits them repeatedly, trying to help them keep up courage and determination. The protection of the other members of the family is also her province—to get them all examined, to build up their resistance, if it is low, and to teach them how



to care for the patient in such a way that nobody can be infected by him. Getting patients into hospitals and sanatoria, sometimes securing suitable work for them when they return—all these things take too much time for a physician, too much special knowledge for even the best intentioned relative or neighbor, and yet they must be done and done well.

While nurses do not make diagnoses, they should be able to recognize the danger signals of cancer and in the campaign for its control help to bring about early consultation and treatment. They have an opportunity to observe the early symptoms and to advise people accordingly.

#### THE STANDING OF THE PUBLIC HEALTH NURSE

"It should be emphasized that a public health nurse whether employed by a city, county or voluntary organization is *not* a charity agent. Her work is that of a nurse and a teacher. While it is true that she gives gratuitous service in the homes of the poor, at the same time she should be at the paid service of self-supporting and self-respecting families. With an income of thirty or forty dollars a week, no family could long afford to pay for the full-time services of a graduate nurse; but such a family need not be

an object of charity. It might afford and be willing to pay for a part-time service and so secure the necessary nursing care for the sick members. Municipal and school nurses have done much to disabuse the public mind of its old habit of associating visiting nursing and charity, and to impress upon it the new idea of public health nursing which may well include all classes of people.

It is the ambition of the Bureau of Public Nursing in the State Department of Health to see Ohio covered with lines of a public health nursing service like a cobweb on the grass, so that no child or maternity patient, however remote, need go without care; so that the various clinics, which the Department expects to see established, may have the necessary link between them and the home; and so that we may have a better protection from tuberculosis and other preventable diseases. For the properly qualified health nurse, going as a friend and with a friend's welcome into clinics and schools and into the homes of the people, brings the individuals to the physician and the physician's message to the people in simple terms which they can understand, and gives a service so great that its extent is difficult to comprehend.

#### Health Department Sounds Warning as Diphtheria and Scarlet Fever Cases Climb

Diphtheria looms up as a grave danger to health in Ohio this winter. During the months of September, October and November, respectively, reported cases in the state totaled 661, 1232 and 1305. December was expected, on the basis of diphtheria experience in previous years, to produce a higher total than any of these months.

The State Department of Health urges physicians, in view of this widespread diphtheria prevalence, to be suspicious of any sore throat in children, to make liberal use of the free diagnostic service offered by the department laboratories and to be prompt in the use of antitoxin in suspected cases. Attention is called to the many fatalities resulting from delayed recognition of diphtheria and from the resulting delay in the administration of antitoxin.

Scarlet fever also exhibits a high prevalence, with the following reported case totals: September 435, October 888, November 1067. Extreme care in diagnosing cases that show indications of scarlet fever is also advised. The health authorities point out for both diphtheria and scarlet fever the great need for instruction of the members of the patient's household in methods of caring for the patient and protecting other members of the family from infection.

The November prevalence of both these diseases was higher than in November of any other year since 1915. Cases are widely scattered over the state.

Smallpox is still prevalent in many parts of

the state, although this fall's reported cases are less numerous than in 1917 and 1918. The unvaccinated person, wherever he may reside in the state, is said by the health authorities to be in serious danger of contracting smallpox, as opportunities for exposure are numerous.

#### Chair of Anesthetics

The Committee on Professional Schools of the University of Cincinnati has under consideration a recommendation made by Dr. John C. Oliver, acting dean of the medical college, that a chair of anesthetics be established. If the committee reports favorably the university will be one of the first schools in the country to establish such a chair. A department for training dietitians was authorized recently.

At a meeting of directors of the university, December 2, the resignations of Dr. Paul G. Woolley, professor of pathology, and Moses Scholtz, professor of dermatology were accepted. Dr. Woolley resigned to accept a position with a chemical company at Detroit and Dr. Scholtz expects to go to California.

The Abbott Laboratories of Chicago, have increased their advertisement in *The Journal* from a half to a full page in this issue. This is evidence that the readers of *The Journal* are careful to patronize our advertisers, and is a tribute to the policy adopted, of publishing only such medical products as have been accepted by the Council of Pharmacy and Chemistry.



## NEWS NOTES OF OHIO

*Alliance*—Dr. Delbert J. Miller of this city, received a fractured jaw, fractured knee and cuts and bruises about the face and head December 1, when his automobile was struck by a Cleveland and Pittsburgh freight train.

*Carlisle*—Dr. Frank Taliaferro is spending the winter in Manates, Florida.

*Columbus*—Dr. Andre Crotti has purchased property at the corner of Town Street and Grant Avenue, this city, and expects to erect an office building for physicians.

*Findlay*—Dr. John C. Martin was elected commander of General Rosser Camp No. 13, of the United Spanish War Veterans at a recent meeting of the camp.

*Cleveland*—Dr. Tomo Inouye, Japanese delegate to the International Conference of Women Physicians recently held in New York, was the guest of Dr. Adda Hedges Brady of this city, for a short time in November. Dr. Inouye is school physician of the city of Tokyo. She first came to America in 1897 to complete her medical education, after being awarded an American scholarship, and studied in a number of colleges in Ohio and Michigan.

*Chillicothe*—Dr. John Franklin sustained minor injuries, November 17, when his automobile skidded on a bridge and plunged thirty feet to railroad tracks below.

*Marion*—Dr. J. W. Jolley, a former practitioner of Morral, has opened offices for general practice and X-ray work here, after receiving his discharge from military service. He recently completed a post-graduate course in X-ray in New York.

*Toledo*—A fire which occurred in the absence of the family, November 27, damaged the home of Dr. L. H. Herold to the extent of \$2000.

*Columbus*—Dr. H. B. LaFavre has returned from France after fourteen months' service. At Brest he was connected with Base Hospital No. 5, and at Nancy he was port medical officer. Previous to that he served on the transport U. S. S. Mallory and El Oriente, and was cited for transport work in a submarine battle.

*Kent*—Dr. J. T. Norton has been employed as joint company physician for the Mason Tire & Rubber Company and the Mason Cotton Fabric Company.

*Roseville*—Mrs. Ella Kennedy, wife of Dr. G. L. Kennedy, died at her home here November 20, from injuries sustained when she was struck by an automobile in front of the Kennedy home.

*Fremont*—Dr. Sherman McKenney, world war veteran, has been appointed coroner of Erie county, succeeding Clyde Eagon, resigned.

*Wauseon*—Dr. W. H. Sisson of Northfield, Ver-

mont, has located here. He is a graduate of the College of Medicine of the University of Vermont at Burlington, and has engaged in general practice at Northfield for the past four years.

*Cleveland*—Mrs. Winifred Darby, wife of Col. John C. Darby, former chief surgeon of the 37th Division, died at her home here, November 18, from pneumonia.

*Avon*—Dr. John Reed Pipes assumed his duties as mayor of this village, January 1.

*Yellow Springs*—Dr. Edwin I. Thorn, who practiced medicine for many years in Yellow Springs, died at his home in Salt Lake City, Utah, recently.

### Prizes Awarded for Essays

In 1917 Dr. Hamilton Fisk Biggar of Cleveland offered to the Cleveland Medical Library Association the income from a fund, to be used as prizes for essays submitted in competition on subjects designed to promote medical knowledge and medical practice. The income from this fund for distribution for 1919 was \$600.00 and at the annual meeting of the association this sum was distributed in three prizes. On account of the excellence of two of the papers it was impossible to fairly award a first prize, therefore a prize of \$250.00 was awarded to Dr. R. G. Pearce for his essay on "Cardio-Respiratory Mechanism in Health and Disease," and another of the same amount to Dr. R. W. Scott, for his essay on "Studies of Pulmonary Emphysema." A prize of \$100.00 went to Dr. Marvin D. Shie for his essay on "The Importance and Scope of Modern Industrial Medicine."

The officers of the association for 1920 are: president, Dr. J. P. Sawyer; vice-president, Dr. A. Peskind; secretary, Dr. G. E. Follansbee; treasurer, Dr. C. L. Cummer, and directing librarian, Dr. C. A. Hamann.

### Honorably Discharged from Military Duty

*Ada*—A. N. Wisely. *Akron*—S. E. McAdoo. *Ashtabula*—N. E. Stewart. *Ashville*—H. V. Postle. *Bloomington*—E. H. McDonald. *Bowling Green*—F. A. Stove. *Canal Fulton*—A. M. Shafer. *Cincinnati*—J. H. Buff, W. S. Kautz, B. H. Lamb. *Cleveland*—E. P. Neitz, A. G. Crow, E. E. Wolf. *Columbus*—L. H. Russell, G. C. Schaeffer, N. C. Dysart, W. H. McKay. *Co-shocton*—W. M. Keenan.

*Dayton*—E. A. Baber, W. L. Kline, E. R. Werner. *Delphos*—J. R. Tillotson. *East Liverpool*—C. H. Bailey. *Findlay*—P. C. Pennington. *Mansfield*—E. Remy, Jr. *Marysville*—Angus MacIvor. *Mount Vernon*—J. M. Pumphrey. *Mount Victory*—E. E. Lynch. *Newark*—V. R. Turner. *New Richmond*—D. M. Roberts. *New Vienna*—H. M. Brown. *Norwalk*—J. D. Coupland.

*Painesville*—J. R. Davis. *Springfield*—J. A. Link. *Tiffin*—H. L. Wenner, Jr. *Toledo*—J. T. Lawless, Jr. *Trimble*—V. G. Danford. *Van Wert*—N. E. Leake. *Winterville*—W. S. P. Donehoo. *Xenia*—R. K. Finley, L. Shields.

## Preliminary Report of Committee Surveying State Departments Indicates Changes Affecting Medical Practice are Under Consideration

The joint legislative committee on administrative reorganization, authorized by resolution at last winter's session of the legislature to investigate state departments with a view to consolidating and reorganizing a number of such for greater efficiency and economy, has presented an interesting preliminary report to the legislature. The report covers five printed pages and enumerates thirty-five proposals which it has under consideration, including some vitally affecting the physicians of Ohio.

The committee is composed of three members of each branch of the assembly and consists of Senators Whittemore of Akron, chairman; Wright of Cleveland, vice-chairman; Bellew of Cincinnati; and Representative Crabbe of London, secretary; Dunn of Bowling Green, and Foster of Coshocton. In its field studies of the various departments, the following investigators, chosen for their experience as field investigators in other states and cities are assisting the committee: D. C. Sowers, director of the Akron Bureau of Municipal Research; William H. Allen and Gaylord C. Cummin of the Institute for Public Service, New York City; L. D. Upson, Arch Mandel, C. E. Rightor, Harrington Place, of the staff of the Detroit Governmental Research Department; Henry Steffens, Jr., comptroller of Detroit, and S. H. Wolfe, consulting actuary of New York.

The report declares that the three sources of direct waste of money and energy have been found to be defective organization, defective operation and programs that are too small for Ohio's present needs. The responsibility for waste of money and energy and of opportunity is also threefold: constitutional requirements which foster waste and mismanagement; statutory requirements which foster waste and mismanagement, and administrative break-downs or defects in internal organization which can be corrected without change of statute or constitution.

For correcting these conditions the committee is considering proposals which have come to it from citizens and agencies in various parts of the state. Some few, the report states, will require constitutional amendments; a majority will require only statutory changes, in the making of which it is believed the executive will join with the legislature; and a few defects of administration that require neither statutory nor constitutional changes but will undoubtedly be corrected as the facts are brought to the attention of the responsible officers and to the public.

For 49 present separate administrative offices, departments, boards, commissions and agencies to which appropriations are made, the committee states in the introduction to its preliminary re-

port that it has been asked to propose a reduction to not more than sixteen, probably fewer, without making any mere paper changes and consolidating only for improving service.

Among twelve changes in organization which the committee is considering, and which would not entail constitutional amendments, are five in which the medical profession is directly interested:

1. The substitution of one for four commissioners for the work of the present board of administration and the administrative work of the board of charities.

The board of administration was created during the administration of Governor Harmon and consisted of four members with Dr. A. F. Shepard of Dayton as president. The salaries of members at that time were \$5,000 a year, but under the Willis administration were reduced to \$4,000 a year, at which salary the following members are now serving: H. S. Riddle, president, and Dr. Edward Reinert of Columbus; I. S. Guthrey of Marion, and D. S. Creamer of Belmont County.

It is scarcely probable that this step will be recommended by the joint legislative committee after thorough consideration. The State Association has since the establishment of the board stoutly maintained that one member should be a physician, thereby insuring to state wards treatment with a view to their restoration to health, and eliminating the possibility of our state hospitals becoming entirely custodial under the management of construction and financial experts who might be inclined to place conservation of public funds before the physical wellbeing of its wards.

2. Transfer of the bureau of vital statistics from the secretary of state's office to the department of health.

It is claimed that this plan has already proved successful in a number of states. The collection of vital statistics may be considered part of the work of the state department of health, where the data collected, especially death figures, would be additionally valuable in supplementing the epidemiological and statistical work of the division of communicable diseases. Despite emphasis which has been placed on the importance of reporting communicable diseases to the health department in accordance with the law, reports are very incomplete, and the information collected by the bureau of vital statistics would be of material value to the health department in shaping its preventive program which necessarily hinges on information derived from morbidity reports.



3. Consolidation under one administrative officer several of the present inspectional services, and a similar consolidation of registering and licensing services.

Inasmuch as Senator Howell Wright, vice-chairman of the committee, is known to advocate the elimination of the state medical board and the substitution of a department of examination and registration, it is possible that the committee may make such a recommendation in its final report, although it is not specifically mentioned in the preliminary report.

Senator Wright, it will be remembered, included such a recommendation in his report to Governor Cox last winter, after completing at the request of the governor an analysis of laws governing medical licensure and the operation of hospitals. Thus far no investigation of the state medical board has been undertaken by the legislative reorganization committee or its investigators, and, of course, no action can properly be taken until an investigation has been made. This is a matter with which the profession should acquaint itself. The State Association will, of course, not favor such a radical change in the

method of medical licensure until the merits of the proposed system are fully proved.

4. Abolition of the separate college of homeopathy at the state university and provision for a separate course in materia medica peculiar to the homeopathic school in the main college of medicine at the state university.

5. Transfer dairy and food division from the department of agriculture to the department of health.

Supervision of Ohio's dairy and food products would unquestionably be more efficient if all efforts in this direction were coordinated under the state department of health. At present this work is done by a corps of inspectors from the state department of agriculture assisted by local health departments.

In closing, the committee states that while it has not yet had time to even digest all the suggestions that have been made to it, it has gone far enough to see the possibility of saving many times the appropriation made for the committee, and is prepared to offer a few constructive suggestions at once, or, after hearing, to make a comprehensive report early in the year.

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\* MEETINGS OF COLUMBUS \*  
\* ACADEMY OF MEDICINE \*  
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The annual meeting of the Columbus Academy was held December 8, at which time reports were made by the treasurer and the following committees: Legislative, H. M. Platter, chairman; Public Health, W. D. Deuschle; Surgical Progress, Yeatman Wardlow; Medicine, H. B. Blakey; Obstetrics, Andrews Rogers; Therapeutics, C. H. Wells.

At the banquet held at the Athletic Club on the 15th Judge R. M. Wanamaker gave an address on "Political Therapeutics." Counting of the ballots resulted in the election of Dr. Chas. W. McGavran as president for 1920; Dr. R. A. Ramsey, vice-president, and Dr. McKendree Smith, trustee.

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\* MEETINGS OF THE CLEVELAND \*  
\* ACADEMY OF MEDICINE \*  
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The one hundred and fifty-sixth regular meeting of the Cleveland Academy of Medicine was held in the auditorium of the medical library, November 21. The program consisted of an address by Dr. Emil Goetsch, professor of surgery at Long Island College Hospital, on "A Consideration of Exophthalmic Goitre and the Adrenalin Test in

Hyperthyroidism in the Light of Recent Work." Dr. Goetsch was formerly a member of the staff of Johns Hopkins Hospital and has done considerable original work on this subject. The discussion of his paper was opened by Drs. David Marine and G. W. Crile.

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\* COUNTY SOCIETIES \*  
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#### FIRST DISTRICT

*Clermont County* Medical Society held its regular meeting at Bethel, November 19, electing the following officers for the coming year: President, Dr. A. B. Rapp; vice-president, Dr. E. C. Kennedy; secretary-treasurer, Dr. F. H. Lever; censors, Drs. R. Belt, O. C. Davidson and T. A. Spiedel. Drs. Mitchell and Ireton were appointed to serve as legislative committeemen.

The paper of the day was given by Dr. W. D. Haines of Cincinnati, his subject being "The Influence of Extra Gastric Lesions in the Production of Stomach Symptoms." A number of interesting case reports were given by members of the society. Several new members were taken in at this meeting, at which the attendance was large and considerable interest was manifested in the problems confronting the profession.—F. H. Lever, Correspondent.

#### SECOND DISTRICT

*Darke County* Medical Society, in session at Greenville, November 13, had as its guests Drs. R. R. Kahle and J. E. Monger of Columbus. Dr.



Kahle gave an exceedingly interesting talk on "Radium and Its Effect on Cancer," illustrating methods used in treatment with three cylinders of radium. Dr. Monger explained the work of the State Bureau of Vital Statistics, of which he is registrar, giving his audience a better appreciation of the value of birth and death registration.

At the December 11 meeting Dr. G. H. Harley of Hollansburg was elected president; Dr. Matthew Hunter of Greenville, vice-president; Dr. A. F. Sarver of Greenville, secretary-treasurer. Annual dues for the year 1920 were increased from six to seven dollars, and a number of interesting case reports were presented.—B. F. Metcalfe, Correspondent.

*Miami County* Medical Society devoted its meeting of December 4 to the election of officers for the ensuing year. Drs. R. D. Spencer, J. B. Barker and J. F. Beachler, all of Piqua, were elected president, vice-president and secretary-treasurer, respectively, and Dr. J. E. Murray of Piqua was chosen to act as legislative committeeman and delegate to the state meeting.—J. F. Beachler, Correspondent.

*Preble County* Medical Society members were the guests of Dr. and Mrs. S. P. Carter of Eaton on November 25. The scientific session included papers by Dr. Churchill of Richmond, Indiana; by Dr. J. E. Hunter of Greenville on "Middle Ear and Mastoid Diseases;" and by Dr. M. C. Hunter of Greenville on "War Gas." The society approved a new fee schedule, copy of which is printed on page 62, and elected the following officers for the ensuing year: President, W. H. Tucker, Eldorado; vice-president, L. E. Emerick, Eaton; secretary-treasurer, S. P. Carter, West Manchester; legislative committeeman, D. W. McQueen, Camden.—S. P. Carter, Correspondent.

### THIRD DISTRICT

*Allen County* Medical Society, meeting in regular monthly session at Lima, December 2, elected Dr. Charles Gamble, president; Dr. I. D. Baxter, vice-president; V. H. Hay, treasurer; Dr. T. R. Thomas, state delegate. Dr. Baxter gave an interesting talk on the study of tumors, which was followed by a general discussion led by Dr. Thomas.—News Clipping.

*Logan County* Medical Society made the chief feature of its annual banquet in Bellefontaine, November 7, a welcome to the members who had been in active service during the world war. Dr. Robert H. Butler acted as toastmaster and those who responded were Drs. A. J. McCracken, F. B. Kaylor, Malcolm Pratt, E. R. Henning, W. C. Pay, W. S. Stinchcomb, W. O. Loffer, of Bellefontaine; J. W. Croft of West Liberty, and A. M. Curl of Quincy.

At the December session the following officers were elected: President, J. W. Croft, West Liberty; vice-president, W. C. Pay, Bellefontaine; secretary-treasurer, Carrie A. Richeson, Belle-

fontaine; legislation committeeman, W. S. Phillips, Belle Center.—Carrie A. Richeson, Correspondent.

*Van Wert County* Medical Society, meeting in Van Wert, December 2, elected Charles G. Church, president; E. V. Hall, vice-president, and N. E. Leake, secretary-treasurer.—C. R. Keyser, Correspondent.

### FOURTH DISTRICT

*Putnam County* Medical Society held its regular monthly meeting, December 4, and elected the following officers: P. D. Bixell of Pandora, president; J. A. Harrold of Ottawa, vice-president; H. A. Neiswander of Pandora, secretary-treasurer; C. O. Beardsley, of Ottawa, corresponding secretary. As secretary-treasurer Dr. Neiswander succeeds Dr. C. F. Douglass of Kalida, who has admirably administered the duties of that office for many terms.

### FIFTH DISTRICT

*Lake County* Medical Society held its annual meeting at the Parmly Hotel, Painesville, December 8, at which Dr. J. V. Kurlander of Cleveland presented an excellent paper on "Disease of the Knee." Following the scientific program the annual election of officers was held in which Dr. W. P. Ellis of Painesville was chosen president; N. V. Tuttle of Madison, vice-president; E. S. Jones of Painesville, secretary-treasurer; J. V. Winans of Madison, medical defense committeeman.—E. S. Jones, Correspondent.

*Lorain County* Medical Society met at the Elyria Y. M. C. A., November 11, with 24 members present. Eight applications for membership were received. The society passed resolutions encouraging county commissioners to take steps toward establishing a tuberculosis hospital and a committee was appointed to cooperate in the project. Dr. W. F. Dager of Lorain gave an interesting talk on "Pulmonary Complications," illustrated by stereopticon slides made during service at Camp Funston.

Thirty-one members attended the meeting of December 9, which Dr. W. S. Baldwin addressed on "Experience Abroad with the American Red Cross Service." Dr. W. E. Hart spoke on the life and character of the late Dr. O. T. Maynard, after which the society adopted resolutions of sympathy. Election of officers for 1920 resulted in the selection of Dr. W. A. Pitzele as president; Dr. J. R. Pipes, vice-president, and Dr. R. A. Pease, secretary-treasurer. In his newly elected position Dr. Pease succeeds Dr. C. O. Jaster of Elyria, who brought the Lorain County organization to a high state of efficiency during several terms as secretary-treasurer.

### SIXTH DISTRICT

*Ashland County* Medical Society, in session at Samaritan Hospital, Ashland, November 4, elected Dr. C. C. Patton, president; Dr. R. C. Ash, vice-president; Dr. W. M. McClellan, secretary-

treasurer; Dr. G. B. Fuller, delegate, and Dr. F. V. Dotterweich, alternate.

At the December 2 meeting, Dr. C. C. Patton gave a talk on the value of laboratory tests in supplementing clinical diagnosis, and Dr. Ray C. Ash on the part the X-ray plays in early recognition of bone lesions, neoplasms, fractures and dislocations. In connection with his paper Dr. Ash presented numerous films prepared during his service abroad.—W. M. McClellan, Correspondent.

*Ashtabula County* Medical Society, in session at Ashtabula, November 18, listened to a splendid address by Dr. W. E. Lower of Cleveland on "Prostatic Problems," illustrated by motion pictures.

Attendance at the meeting of December 9, held at the Hotel Cleveland, Conneaut, numbered 62. Features of the program were the annual dinner and the election of officers which resulted in the choice of W. H. Leet as president; C. E. Case, vice-president; B. C. Eades, secretary; A. W. Hopkins, treasurer. Members were encouraged to strengthen the organization by enlisting new members. The urgent need of the county for a tuberculosis hospital was discussed.—Bernice A. Fleek, Correspondent.

*Mahoning County* Medical Society held its annual meeting in Youngstown, November 24, with Dr. Royal B. Dobbins presiding. Addresses were given by Rev. M. F. Griffin, president of the Ohio Hospital Association, on "First Ideals of Hospital Organization;" Dr. H. H. Young of the Children's Service Bureau, on "Child Direction," and Dr. Frank Smithies of the University of Michigan on "Epidemic and Sleeping Sickness."—News Clipping.

*Stark County* Medical Society enjoyed an excellent symposium on the subject of cancer, November 18. The essayists and their subjects were: 1. Pathology of Cancer, D. S. Gardner, Massillon. 2. Cancer of the Breast, E. J. March, Canton. 3. Cancer of the Uterus, Perry King, Alliance. 4. Cancer of the Stomach, B. F. Dougherty, Canton. 5. Superficial Cancers and Treatment by X-ray, John E. Shorb, Canton.

*Summit County* held its last meeting for the year at the People's Hospital, December 4. Dr. Andre Crotti of Columbus, chairman of the State Association's Committee on Control of Cancer, gave a very interesting illustrated lecture on "Cancer," emphasizing the importance of early recognition and the removal of irritations before they become cancerous. Drs. D. W. Stevenson president, respectively, and Secretary U. D. Seidel and Treasurer T. W. Hollingsworth were re-elected to their former posts.—U. D. Seidel, Correspondent.

*Tuscarawas County* Medical Society, in session at New Philadelphia, December 9, adopted a

resolution requesting its senator and representative to use their influence to maintain the principles of the Hughes act by assisting in the correction of defects through suitable amendments. Officers elected for 1920 are: President, H. A. Coleman; vice-president, A. C. Dempster; secretary-treasurer, E. D. Moore; state delegate, B. G. Anderson; legislative committeeman, J. A. McCollam; medical defense committeeman, J. E. Groves. The next meeting is scheduled for Uhrichsville.—E. D. Moore, Correspondent.

## EIGHTH DISTRICT

*Athens County* Medical Society announces the election of the following officers for 1920: president, Dr. J. M. Higgins, Athens; vice-president, J. S. Rhodes, Nelsonville; secretary-treasurer, T. A. Copeland; delegate, A. L. Pritchard, Nelsonville, and alternate, N. Hill, Nelsonville.

*Licking County* Medical Society held one of the best meetings in the history of the society, November 20. Twenty-four members were seated at the regular monthly dinner held at the Hotel Warden, after which the society adjourned to Taylor Hall, where Dr. J. M. Rector of Columbus spoke on "Pre-ulcer and Pre-cancer Stage in Gastric Complications." Dr. Rector's paper was illustrated by lantern slides and proved to be exceedingly interesting and instructive. The annual election of officers resulted in the selection of Dr. C. J. Loveless of Granville as president; Dr. Carl Evans of Newark, vice-president; Dr. W. E. Boyer of Newark, delegate, and Dr. George N. Brown of Hebron, alternate. Dr. W. E. Shrontz was re-elected secretary-treasurer.—W. E. Shrontz, Correspondent.

*Morgan County* Medical Society members were guests of Dr. L. Marks of Rocky Glen Sanatorium at a luncheon, November 18. In the afternoon a program was rendered in which Dr. Marks presented a paper on "Tuberculosis and Some of the New Treatments." Dr. C. V. Davis of Pennsville was elected president; Dr. Marks, vice-president, and Dr. C. E. Northrup of McConelsville, secretary-treasurer, for the coming year.—C. E. Northrup, Correspondent.

*Muskingum County* Medical Society held its annual meeting in Zanesville, December 10, at which time the following officers for 1920 were elected: D. J. Matthews, president; G. B. Trout, vice-president; Maurice Loebel, secretary-treasurer; W. A. Melick, delegate; D. J. Matthews, alternate; C. U. Hanna, legislative committeeman. A committee was appointed to revise the fee schedule. The society went on record as being opposed to compulsory state health insurance. Following the business session Dr. W. A. Melick presented an interesting specimen of an enlarged septic gall bladder which he had removed from a patient.—D. J. Matthews, President.



## Ohio Sets Example in Comprehensive Program of Public Health to Meet After-the-War Needs

An analysis of a detailed report recently issued by the United States Public Health Service, in which a uniform program intended especially to meet after-the-war needs, shows that Ohio is not only in the forefront of the other states in modern legislation and regulations but that in many instances the example has already been set here for the remainder of the country.

This is particularly true of activities encouraged by the Griswold health act; the modern methods of handling vital and morbidity statistics; in legislation and activities of the State Medical Board looking toward higher educational standards, and the elimination of unqualified practitioners; and is particularly true in the unselfish and helpful attitude of the medical profession generally in the advocacy and support of sickness prevention measures and in effective co-operation of state departments in all matters directly beneficial to the public and consequently bringing credit to the profession itself.

The report containing these recommendations issued by the United States Public Health Service is divided under fifteen main headings, as named below, and under which explanatory comment pertinent to the Ohio situation is made.

### 1. INDUSTRIAL HYGIENE—

Ohio is a pioneer state in industrial hygiene work. This health activity in Ohio began in 1913, when the General Assembly appropriated funds for an occupational disease survey. The report of this survey—"A Survey of Industrial Health Hazards and Occupational Diseases in Ohio," published by the State Board of Health in 1915, is a standard work in industrial hygiene. The survey organization continues in a permanent form as the Division of Industrial Hygiene of the State Department of Health. Investigative work in relation to health hazards and occupational diseases is carried on, advice on industrial hygiene subjects is given and educational activities are engaged in. A recent investigation was the study of the "Health of Ohio Coal Miners," results of which were incorporated in the report of the Ohio Health and Old Age Insurance Commission and have since been published by the State Department of Health.

The weakest point in Ohio's system for the control of occupational diseases is the very great incompleteness of case reporting. The general failure of physicians to report occupational diseases makes it difficult for the Department of Health to bring about needed improvements in industrial health conditions and prevents the compilation of statistics on occupational disease prevalence in the state. A bill to provide a penalty for failure to report these cases, similar to that existing in regard to other reportable dis-

eases, has been passed by both branches of the legislature.

The State Department of Health is working in cooperation with the Public Health Service in industrial hygiene activities and is in full accord with the Service program for industrial hygiene.

### 2. RURAL HYGIENE—

Rural hygiene in Ohio is in its beginnings. Under our former local health organization, provision for hygiene of rural communities was the most glaring omission. The Griswold bill permits rural districts to provide sanitary supervision as thorough and as competent as that provided for the cities. The matters mentioned in the Public Health Service program as proper subjects for intensive campaigns will be looked after in every Ohio county by the new health commissioners, public health nurses, sanitary inspectors and other local health board employees. Health education will be carried out in the same way and the aid of unofficial local agencies in this work will be sought.

In this connection the Health Service suggests the making of studies by a special board of service officers to determine improved methods of rural sanitation, the studies to be confined to the most practical and essential phases of the subject.

### 3. PREVENTION OF DISEASES OF INFANCY AND CHILDHOOD—

The Ohio child hygiene program is similar in scope to that of the Public Health Service, with the addition of a section devoted to the child's period of adolescence and with the periods of infancy and early childhood combined under one head since the problems presented by the two age-groups are similar. State activities are centralized in the Division of Child Hygiene of the State Department of Health, working in co-operation with other statewide child welfare agencies and serving in an advisory capacity to local health departments. The division has been enlarged recently by the addition of two assistants to the director. The public health nursing service in each district, encouraged by the Griswold bill, is expected to greatly increase the efficiency of the child hygiene work in the state. Details of the state program, designed to serve as a standard for local hygiene activities, correspond in general to the Public Health Service outline.

### 4. WATER SUPPLIES—

Supervision of public water supplies, directed by the Division of Sanitary Engineering of the State Department of Health, is thoroughly organized in Ohio. The division keeps a careful check upon local water supply and purification systems. The Bense-Ritter Act (the former Bense Act with amendments added by the pres-

ent legislature) gives the department power to enforce correction of stream pollution and the Sanitary District Act, passed at the present session, makes possible the union of local political subdivisions into sanitary districts to carry out joint water supply and sewage disposal projects.

#### 5. MILK SUPPLIES—

From a statewide standpoint supervision of milk supplies is imperfectly developed in Ohio, although many cities provide in an admirable manner for this phase of public health work. State activities to protect the public from impure milk are in the hands of the Dairy and Food Division of the State Department of Agriculture, which maintains a force of inspectors. Territory covered by city inspectors, sent out into the surrounding area from which milk supplies are drawn, frequently overlaps territory covered by state inspectors, and two cities may overlap each other in their milk-inspection areas. The same dairy farm, therefore, may be visited regularly by two or three inspectors. Better organization, to coordinate supervision, and extension of pasteurization requirements are said to be needed in Ohio. It is possible that the new district health organization may provide a means for both these improvements.

#### 6. SEWAGE DISPOSAL—

The statements made under the head of "4. Water Supplies" may be applied to sewage disposal.

#### 7. MALARIA—

Malaria is too unimportant a health problem in this state to necessitate the application of the methods of control mentioned in the federal program. Malaria is a reportable disease in Ohio and laboratory examinations for the diagnosis of the disease are made by the State Department of Health.

#### 8. VENEREAL DISEASES—

Ohio is receiving financial aid from the federal government in venereal disease control work, and this phase of the state's health program is identical with that of the Public Health Service. The work is directed by a bureau of venereal diseases in the Division of Hygiene of the State Department of Health. Twenty-four free venereal disease clinics are maintained in Ohio. Reporting of cases is still very incomplete, although there has been some improvement in the past year or two.

Among recommendations under this heading made by the Public Health Service the necessity of cooperation with national, state and local authorities and volunteer associations is emphasized. The Ohio State Medical Association has, under the auspices of its Committee on Medical Education, cooperated in this work by holding group meetings of physicians in various sections

of the state for a study of the diagnosis, treatment and control of venereal diseases.

#### 9. TUBERCULOSIS—

Ohio is carrying out a tuberculosis program similar in all respects to that outlined by the Public Health Service and is co-operating fully with national, state and local unofficial agencies for the prevention of tuberculosis. A bureau of tuberculosis exists in the Division of Hygiene of the State Department of Health, establishment of sanatoria is encouraged and reports of admission and discharges are received from existing sanatoria and hospitals and followed up, as are also reports of men discharged from the army with tuberculosis. Industrial tuberculosis receives the attention of the Division of Industrial Hygiene. Case reporting is incomplete. Hospital facilities are inadequate.

#### 10. RAILWAY SANITATION—

Being largely a matter for federal supervision, this phase of health work receives no special attention from the state, except in the matter of water supplies. Supervision of railroad water supplies in Ohio is delegated by the United States Public Health Service to the State Department of Health, and no railroad may furnish its patrons with water which is not approved by that department.

#### 11. MUNICIPAL SANITATION—

Several Ohio cities are carrying out health programs which compare favorably with that outlined by the Public Health Service, and it is hoped the standards listed will be applied to all municipalities under the new Griswold bill. Most of the activities mentioned in the federal program are included among the duties required of local health boards and health departments by the Griswold bill. The State Department of Health will encourage the extension of municipal health activities in accordance with a program equal in completeness to that of the Public Health Service.

Among recommendations made by the Public Service under this heading, provision for the carrying out of which has already been made by the enactment of necessary ordinances in most municipalities, are establishment of community health centers; enactment of proper building ordinances and provision for sanitary supervision of housing, especially in industrial centers, including improvements in transportation, so as to permit redistribution of persons living in overcrowded communities; adequate systems of medical supervision of schools; reduction of infant mortality by proper provision for prenatal care, bed space in maternity hospitals, infant welfare stations, visiting nurses, and milk and ice stations; stimulation of municipalities to realize their own responsibilities for health, and the part played by adequate health protection in the happiness and material prosperity of the community.



## 12. HEALTH STANDARDS—

The Ohio State Department of Health recognizes the need for health standards such as mentioned by the Public Health Service, and has taken the initiative in developing standards of its own along some of these lines. It is ready to co-operate in the development of adequate standards to govern all phases of public health activity.

Standards suggested by the Health Service include specifications for safe water and water purification; standard methods of scoring the sanitary condition of communities; additional standards for the manufacture and the purity and potency of biologic products and for arsenamine; standards for illuminating, heating and ventilating public buildings and schools.

## 13. HEALTH EDUCATION—

A health education program, employing all the recognized methods for such work, is being carried on by the State Department of Health and is being extended as opportunity permits.

## 14. COLLECTING OF MORBIDITY REPORTS—

Morbidity reporting in Ohio is required for practically all the diseases ordinarily reportable. Reports serve as the basis for epidemiological and statistical work of the Division of Communicable Diseases of the State Department of Health. Reporting is incomplete—more noticeable so for some diseases than for others—but it is expected that great improvement will result from the installation of the new district health organizations. Administration of the morbidity reporting system in Ohio is in conformity with methods approved by the Public Health Service and is carried on in co-operation with the service. A member of the staff of the State Department of Health holds an appointment as collaborating epidemiologist in the Public Health Service, and each district health commissioner will be an assistant collaborating epidemiologist.

## 15. ORGANIZATION AND TRAINING FOR DUTY IN EMERGENCY OF THE RESERVE OF THE PUBLIC HEALTH SERVICE—

While this is a matter of Public Health Service activity, it suggests the facilities offered in Ohio for training public health workers. The Ohio State University gives a degree in public health, and its readiness to cooperate in public health activities is demonstrated by the extension course opened in the fall to give intensive training to prospective applicants for position in local health organizations.

## Appropriation of \$85,000,000 Sought for Care of War Risk Patients

In a communication to Congress, Surgeon-General Blue of the United States Public Health Service has asked an appropriation of \$85,000,000 to build and equip hospitals to care for

war risk insurance patients, stating that more than 30,000 beds would be needed for the purpose by July 1. No sites for the location were proposed, the surgeon general urging that selection await appropriation of funds to build the institutions.

In estimating the hospital facilities to be needed, the surgeon general took into account the treatment of selective service men passed by local draft boards, but later rejected at camps.

Dr. Blue also recommended that the medical benefits be extended to men who are suffering less than 10 per cent disability from war service, declaring that these men eventually would suffer serious disability unless given proper treatment now.

"Their immediate treatment," he added, "would save the government millions of dollars in preventing ordering payment of compensations and insurance claims under the war risk act."

To provide for 30,000 patients the surgeon general said it would be necessary to build hospitals for 23,000, the health service now having 7200 beds.

## Board Recommends Erection of New State Hospital

The erection of a new hospital for the insane on a farm of 1000 acres in northeastern Ohio, and the sale of the present state hospital in Cleveland, has been recommended by the State Board of Administration to Governor Cox, and the legislature will be asked for an appropriation sufficient to purchase a tract of land, to be made available at once.

The board of administration states that the present location of the Cleveland hospital, a tract of 102 acres, is becoming very valuable for residential purposes. It is impossible to secure additional land near the institution and distant farms have been leased by the state where patients have been employed. The capacity of the hospital is 1500, but the population is 1670 and there is urgent demand for the admission of additional patients.

The board recently suggested that the Columbus Barracks be taken over and used as a hospital for insane soldiers in order to relieve overcrowded condition of the Ohio state hospitals. This suggestion was met by a statement from the war department to the effect that it had no idea of abandoning the Barracks as a military post.

## NATIONAL HEALTH CONSERVATION CONFERENCE

Surgeon General Blue of the United States Public Health Service has suggested that a national health conservation conference be held in Washington soon. Coordination and cooperation between various agencies so as to avoid duplication of effort would be the principal purpose of the gathering.

## Laughable Situation In Unholy Row Between Contending Chiropractic Factions Over Initiative Proposal.

There is an old story about "When Thieves and Cutthroats Fall Out."

There is also a most lively mess on the chiropractic dunghill in Ohio in which the various contending factors are doing their "derndest" to besmirch each other, with the result that the public is opening its eyes to the pretty spectacle presented by the whole outfit.

As recounted in the November issue of *The Journal*, the so-called Ohio Chiropractic Association, Incorporated, is attempting to secure signatures throughout the state to an initiative petition for a proposed law to be first submitted to the General Assembly. It is scarcely probable that sufficient numbers of the unthinking public will sign this petition in time to be effective before the next General Assembly. During the meantime, the petitions are expected to be "canned" and placed in cold storage in preparation for an onslaught in 1921.

It is extremely interesting and illuminating to analyze the personnel behind this newest proposal of the notorious cult of chiropractic. At the head of the petition the statement is made that those who sign thereby designate Paul A. Strand of Youngstown, D. A. Williams, of Ashtabula, George D. Meeker, of Cincinnati, C. C. Rutledge and O. L. Knechtly, of Toledo, to represent them in all matters connected with the petition; Strand being the president (and Meeker the former president) of the Ohio Chiropractic Association, and most of whom have run afoul of the law in the practice of their cult.

While not appearing openly, Russel H. Skeels, head of the chiropractic lobby last spring before the legislature, whom the legislative probe committee stated was not wholly without fault in connection with the bribery charge against Representative Delehanty of Cleveland on the non-medical bill, also has a hand in the mess. Delehanty it will be remembered, on November 24, pleaded guilty to the charge of soliciting a bribe from Skeels. His sentence to the penitentiary was suspended in this case by the presiding judge.

The initiated bill as first drafted contained the following definition of chiropractic: "Chiropractic is defined to be the art and science of the analysis and adjustment of the spine and tissues related thereto for the removal of the cause of disease." Oh gosh, and then some! The proposed bill as it appears on the petition contains the same definition except that following the word "adjustment" the phrase, "by hand" is inserted.

In correspondence between Skeels and Glenn V. John, chiropractor of Lima, reproduced in a recent issue of the *Fountainhead News*, published by B. G. Palmer, "himself," the high mogul of the chiropractic cult, Skeels admits that it would

take a Philadelphia lawyer to construct the definition to meet the approval of all chiropractors in general. The correspondence on this point in which they have the crust to call each other "Dr.," is reproduced below:

"Dr. Russell H. Skeels,  
Columbus, Ohio.

Dear Dr. Skeels: Your letter of the 9/19 at hand, which states that the Definition in Section 9 was the proper wording to use owing to its past record. The definition is in no way a definition of Chiropractic, and said definition could not be sanctioned by any authority who knows what Chiropractic IS. It is a definition, pure and simple, of drugless therapy and in nowise would stand the test before a legislative body, who in the near future shall be, one and all, instructed as to the true definition of Chiropractic, and who will honorably defeat any bill that will attempt to sidestep or cover over Chiropractic in order that those who are practicing this, that and the other thing, can receive protection under the guise of a Chiropractor.

"As I stated in our discussion at Columbus August 10th—that I would oppose any measure or part thereof that Did Not Come Clean and explicit on the cleanness of the Chiropractic principle. Furthermore, I will not support and will openly fight any bill that contains such a definition as the new bill has adopted. I will not cheapen my lifework by legislatively (the strongest influence of all) incorporating drugless therapy as a part of what Chiropractic shall comprise. Chiropractic alone can obtain the support of the legislature, and it never will gain the support until we enter a bill that stands the acid test.

"Skeels, should you retain that definition and your bill become an act, why it is only a matter of time until you will have sold yourself, and us, just the same as was done under the P—E Act except that your programme of procedure was from a slightly different channel.

"Chiropractic as a science can never grow along the lines of therapeutic measures, and the advancement that it should make should be along the lines of surgery, and not therapy. Therapy is fast on the decline, and even the latest medical institutions are fast cutting down on it as a study and promoting more "natural methods" along with surgery. I fear that we are not looking far enough ahead.

"There must be a more scientific and specific definition for Chiropractic incorporated before it shall pass as an act in the Ohio Legislature, and I shall use my influence in that way to promote such a move to come to pass.

"Chiropractic is too clean a science and art; too scientific in its principle and motives, to ever



be snowed under with such a flexible definition as now is incorporated. If you consider my help worth anything CHANGE THAT definition. If not, time will tell legislatively just what my influence will do.

Faternally,

Glenn V. John, D. C."

"Dr. Glenn V. John,  
Lima, Ohio.

Dear Dr. John: I am glad you called my attention to that phase of Section six, which might be interpreted by the court as requiring all graduates of defunct schools to stand in different relation to the law, than graduates of growing schools. I am not sure that such interpretation would be put on it, but we want to avoid any chance of it. Your suggestion will be passed on to the committee, and I shall take it up specially with Mr. Bennett. For if the printed form will cover the situation, it would prove the better wording, inasmuch as the other might prove a point at which we could be attacked by the enemy.

"Some other suggestions for change in Section six have come in, and it is possible that a new wording may be adopted here, which will obviate all defects which have been pointed out.

"Regarding the definition—it would take a Philadelphia lawyer to construct one which would meet the approval of Chiropractors in general. The definition in the draft has been approved by a great number of those who have commented on the bill, while the others are perhaps equally divided on whether the definition should be more or less flexible. The committee selected this definition because it is the one in the straight Chiropractic bill, introduced in 1917, and at that time the opposition did not attack us on the matter of the definition. Moreover, as this bill is to be initiated, it must be so drawn that the foes in the legislature cannot amend it. This definition will pass with the bill,—at least that is the belief of the committee. I do not know the definition adopted by the C. of O. as my name is not on your mailing list, for some good reason, probably, and I would be glad if you will send me a copy of the definition.

With all good wishes,

Your friend,

Russell H. Skeels, D. C."

As a further chapter in the unholy row between the several factions in the cult, George E. Lauby, under date of November 29 addressed an open letter to the chiropractors of Ohio in which he quotes parts of correspondence between other members of the faith, and in which he pays his respects to Skeels, Meeker, Strand, Rutledge, and others. Because of the significant nature of the charges made by Lauby against his former bosom associates, and because the men whom he attacks are the direct sponsors of the initiated proposal, this interesting document of Lauby's is reproduced below in full, and in which he predicts a final grand "crash."

Akron, Ohio, Nov. 25, 1919.

"To the Chiropractors of Ohio.

Dear Doctor:—

"The time has come when it is necessary that I express myself in regards to the conditions in Ohio. I am not asking you to agree with me, but if you wish to take issue with anything I say in this letter I will be pleased to have you do so. I wish to have it understood that I am not writing as an officer of any Association. Simply as a Chiropractor who believes in honesty and fair dealing. No doubt you are convinced by this time that there is something radically wrong somewhere, and perhaps you know as well as I do where it is, and what it is but I am going to write my views and perhaps it will help you to see the light if you have not seen it up to this time.

"Dozens and dozens of letters have come to me asking what I thought of the new Bill. This is what I think of it: It means more money for Somebody, but nobody seems to know how much money or who gets it. Why don't I oppose it? What is the use? It will die a natural death if you give it time. You cannot initiate a bill without money and no one can get money for the Ohio Chiropractic Association because the boys are coming to their senses and will no longer allow a few men to run the Chiropractic profession in Ohio. There are men in Ohio who are honest and true to the principles of Chiropractic, and until such a time when these men hold the offices of the association, there will be very little money gathered from the thinking Chiropractors of Ohio. How many of you know how much money was collected in 1917? Who got it? Did you ever get an itemized report? How much was collected last winter, and who got it? Did you ever get an itemized report? How much was collected for the Referendum which fell through so suddenly, and who got it? I am told \$16,000 was gathered here. Did you ever get an itemized report? How much of an expense is this Dr. Skeels, who never did anything of importance? Do you know that he had a Democrat introduce our Bill in a Republican Legislature last winter, and then you wonder why it did not pass? I am told that Skeels draws a monthly salary of \$400 and Mrs. Skeels about \$150 for being his private secretary. But we are not supposed to know what he gets, simply furnish the money, and smile. How much is Mr. Bennett getting for his noble work? This is a man we can be proud of. What a contrast between men. And still the O. C. A. says 'We did it.' They surely "did it" but it took a man with brains to keep them from suffering for doing it. But do not ask what he is getting, simply send in your money. Do you think a man could be dishonest in his heart and stand in front of you as President of the O. C. A. and smile at you? I learned to know Meeker at Cleveland and when the Non-Medical Bill was introduced. He told us that Dr. Flower had a bill

to be considered, and Dr. Flower then came in from the by-way and said what Meeker told him to say about this wonderful bill. At a later meeting Dr. Flower told me he did not see the bill before that morning when Meeker handed it to him, but Meeker told us it was Flower's bill. I hope Dr. Flower will pardon me for using his name here, as he came to me afterwards and said he was sorry he said what he did that day and said never again. When the split came in Ohio, what did Meeker do; he said to me, "Geo. if you will come over with us we will make you Treasurer." Dr. Meier of Lima was offered the Presidency of the O. C. A., if he would come over. It looks as though they dished the offices to whomever they wished, but the members of the new association though few in number are too honest to fall for Meeker. They are in the fight for Chiropractic and will be there until the State is freed of those who are trying to dominate. I have in my possession a copy of a letter. I shall give you a part of it to think over, and perhaps you will see things in a different light than if I said it.

Nov. 19, 1919.

"Dear Dr. Meeker:—I can do nothing further to hold things together. As I see nothing can be done at this time to prevent a crash. It has been gathering for a long, long time and is now sure to come. It cannot be staved off any longer. Things that might have been done, and by all means should have been done, a long while ago, were sadly neglected. At times when I would suggest some of these matters it was looked upon lightly and as though I knew little about organization work. There was a time when I could have made suggestions which, if accepted, would have been of great assistance but others who deemed themselves wiser and blessed with more foresight executed matters often without even so much as consulting me. You see where we are, as your letter testifies. Things that were entirely wrong have been done and cannot be undone. Why call upon me now? The crash must come. It is a shame and a pity. It will hurt no doubt and hurt dreadfully, but it must come. It hurts me now to think that I ever did anything to stay it off, but I did it in the hope that the house might be cleaned from the inside out. My hope is all gone."

"I have a copy of another letter written to Paul Strand, Pres. of the Ohio Chiropractors Association, Incorporated. I will give you a part of that; perhaps it will help some.

"Paul, this indifference I am showing to your pleadings and requests is due to the fact that there is a real question in my mind as to just where you stand on matters of most vital importance to the membership of the O. C. A.. I want to say to you frankly that I can no longer work on any committee in conjunction with Geo. D. Meeker of Cin. Meeker has pulled stuff in the past and is planning to pull stuff in the future

on the Chiropractors of this state that is absolutely ———. I will not stand for it."

"These letters were written by one of their own bunch and you will soon know more about it.

"You heard the pedigree of Rutledge of Toledo, when you were at Columbus. When Mrs. Dr. Ross of the Ross College told us that he tried to buy a diploma from them for his wife. And he did not deny it. Think of this man, who tries to buy a diploma being one of the officers of the Association. Strand has no use for Chiropractic by itself, at least he says so but, I am told that he told a certain person that he would spend a large sum of money to be elected President of the O. C. A. at Toledo. No doubt he has plenty of opportunities now to spend his money, for if I do not have the wrong hunch his association will be Strand-ed before many moons.

"I hope I have showed you where I stand in regard to the conditions existing in Ohio today, and if you want any more I can give it to you. But this will suffice for the first time.

"Very sincerely,

George E. Lauby."

"No I did not pay my note yet."

(The meaning of this post-script may be surmised.)

#### How Could You, Emma?

One "Dr." Emma Adams, posing as a physician in Cincinnati, worked up quite a practice among a gullible clientele and enjoyed a burst of affluence thereby for a time. However, she was cleverly enmeshed in the toils of the law on November 3 and fined \$50.00 and costs in Police Court.

Among other medicaments of a singular nature, Emma did a thriving business dispensing essence of "Chicken Livers," said to be good for whatever ails you.

Dr. John A. Flanagan, physician, and Italia Mazzei, a midwife, were each fined \$10.00 and costs in the same court for failing to report births coming under their professional care.

#### Cooperative Nursing Program

For the purpose of forwarding the work of public health nursing in Ohio, to prevent duplication and overlapping of work, to simplify administration and to prevent misunderstandings and conflicts of opinion the State Department of Health and the American Red Cross have entered upon an agreement for the joint conduct of public health nursing in Ohio. The agreement is of a pioneer nature, Ohio being the first state to cooperate with the Red Cross in such a manner.

*The Health of the Teacher*, by Dr. William Estabrook Chancellor, author of "Our Schools," etc. Price \$1.25. Forbes & Company, 443 South Dearborn Street, Chicago.



## DEATHS IN OHIO

*Harmon B. Gibbon, M. D., Cincinnati College of Medicine and Surgery, 1877; aged 67; member of the Ohio State Medical Association; died at his home in Tiffin, November 23, after a brief illness from angina pectoris.*

Dr. Gibbons was born in Big Prairie, Wayne County, March 12, 1865, the son of Tobias and Ursula Newkirk Gibbon. His early education was obtained in the village schools and the academy of Perrysville. He afterward became principal of the high school in Perrysburg and upon his retirement in 1874 entered Barnes Medical College, St. Louis; later studying at Western Reserve, Cleveland and the Cincinnati College of Medicine and Surgery.

He began practice in Kansas, where he remained for a year and a half. From there he removed to Bettsville, from which village he moved after ten months to Tiffin, where he practiced continuously until the time of his death except

for intervals spent in post-graduate work from time to time in the medical centers of Philadelphia and New York.

Kindly and gentle in manner, a thorough student in every line of research connected with his work, Dr. Gibbon exemplified in his daily practice the highest and finest ideals of his chosen profession.

In the spring of 1915 he was made president-elect of the Ohio State Medical Association, and during the following year he so familiarized himself with the important duties of the presidential office that he entered upon his work in that capacity in 1916 with well defined plans for extending the scope of the Association's

activities which were successfully carried out.

Dr. Gibbon also served as president of the Northwestern Ohio Medical Association during the years 1906-1908, and of Seneca County Medical Society for the past two years, having been succeeded in that office by Dr. C. L. Daniels only a few days before his death. On October 22, last, he was elected a fellow of the American College of Surgeons.

He is survived by his widow, one son and one daughter.

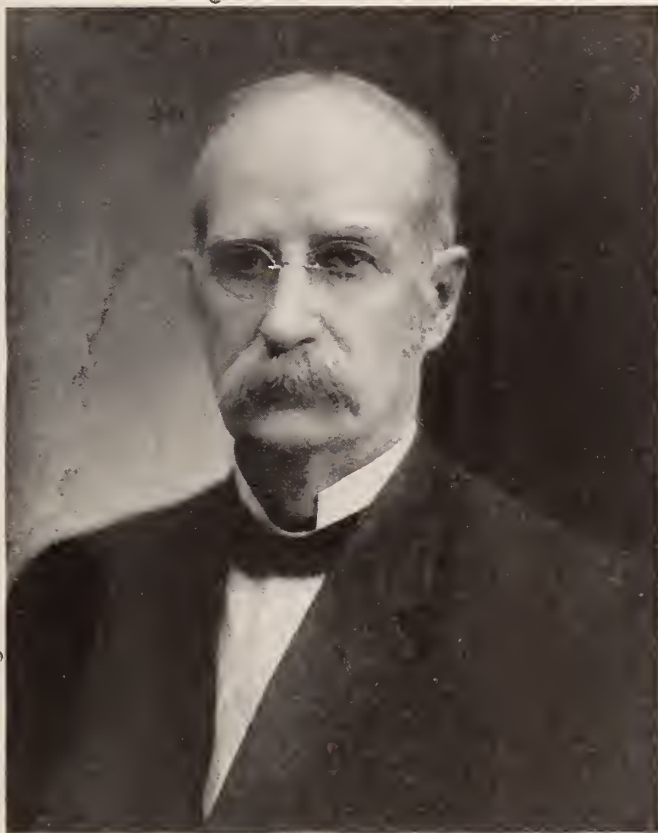
*Clark Everton Brothers, M. D., Eclectic Medical College, Cincinnati, 1881; aged 67; died suddenly at his home in East Akron, December 2, from heart disease.*

*Harry Cook, M. D., Chicago Homeopathic Medical College, 1894; aged 46; died at Grant Hospital, Columbus, December 1, from organic heart disease. Dr. Cook's home was in Urbana, where he had been a practicing physician for twenty years. He is survived by his wife and mother.*

*Andrew Nickell Herring, M. D., Eclectic Medical College, Cincinnati, 1895; aged 56; died at his home in DeGraff, November 17, from endocarditis. Shortly after his graduation Dr. Herring located in Spring Hill, Cham-*

paign County, where he practiced for six years, removing to DeGraff in 1903 and actively practicing there until six weeks before his death when ill health compelled him to retire. He leaves a widow and two sons.

*George Andrew Hettler, M. D., University of Cincinnati College of Medicine, 1916; aged 34; died at his home in Toledo, November 15, after an illness of a week caused by scarlet fever, contracted while attending patients affected with the disease. Dr. Hettler had practiced in Toledo only a few months, having recently returned from three years' military service, during which he served with the Third Ohio National Guard in Mexico, and later with the same organization in*



HARMON B. GIBBON, M. D.

France, where it was known as the 147th United States Infantry. He was commended for meritorious conduct under fire and awarded the Distinguished Service Cross. Surviving are his wife and parents.

*Alois F. Juettner, M. D.*, Cincinnati College of Medicine and Surgery, 1890; aged 67; died at his home in Cincinnati, November 27, after an illness of four weeks. His widow survives.

*Homer W. Osborn, M. D.*, Cleveland University of Medicine and Surgery, 1871; aged 6; died at his home in Cleveland, November 20. Dr. Osborn was a veteran of the Civil War and a practicing physician in Cleveland for fifty years.

*Bernard Mellen, M. D.*, licensed to practice in Ohio, 1896; aged 69; died at his home in Cleveland, November 13, from cerebral hemorrhage. He had practiced in Cleveland for thirty-five years, having retired two years ago because of failing health precipitated by a street car accident in which he was injured two years prior. He leaves a widow and five sons.

*John Myers Swan, M. D.*, University of the City of New York, 1885; aged 59; life member of the Ohio State Medical Association; died in Pittsburgh, November 11, from fractures of the skull sustained when he was struck by an automobile truck. For twenty-nine years Dr. Swan had been a medical missionary under the Presbyterian Board of Foreign Missions and for the past five years has been owner and operator of the Hillcrest Hospital, Canton, China. Dr. Swan's Ohio home was at East Liverpool and he and Mrs. Swan had been visiting in the United States, with the expectation of returning to China in the near future.

*Albert Riley Cain, M. D.*, Columbus Medical College, 1892; aged 69; member of the Ohio Medical Association and Fellow of the American Medical Association; died at his home in Cambridge, November 30, from apoplexy. Dr. Cain was well known in Noble County, having practiced in that county for many years.

*Colon J. Spence, M. D.*, Miami Medical College, 1883; aged 61; member of the Ohio State Medical Association; died at his home in Milford, Clermont County, December 2, after several months' illness resulting from influenza contracted last February. Dr. Spence had practiced in Milford for more than 15 years and had served ten years as president of the Clermont County board of education. He was formerly a member of the staff of the Jewish Hospital, Cincinnati.

#### MARRIAGES IN OHIO

Dr. Leroy Belt of Kenton, and Miss Frances D. Jordan of Marblehead, Ohio, recently.

Dr. John Lester Webb of Carbon Hill and Miss Dorothy Sweazy of Columbus, October 29.

Dr. Stanley J. Bown and Miss Anna Mae Martin, both of Richwood, November 15.

#### Toledo Leads in Reporting Venereal Cases

Toledo physicians have a better record for consistent reporting of venereal diseases to the health authorities than have the doctors of any other city in Ohio. This fact is apparent in a summary of venereal disease reports for the years 1915, 1916, 1917 and 1918, recently compiled by the bureau of venereal diseases of the State Department of Health. From 500 to 750 cases of gonorrhea and syphilis were reported from Toledo each year during this period.

With 1918 Akron jumped into the lead as a source of venereal disease reports, submitting in that year 396 notifications of syphilis cases and 1,269 of gonorrhea.

Physicians in nearly all other cities are shown by the summary to be remiss in complying with the regulations requiring reports of venereal disease cases occurring in their practice, although individual doctors in many localities are complying with the request for such reports. Presumably the physicians who fail to report cases also fail to comply with the further rule that they shall supply to all venereal patients printed instructions supplied by the State Department of Health, designed to guide patients in guarding against infection of other persons.

No 1919 report totals for individual cities have yet been compiled but they will be ready early this year.

In all, more than 22,000 cases of venereal diseases had been reported in Ohio from 1915, when syphilis and gonorrhea were first made reportable, through 1918. The new venereal disease regulations, adopted by the State Department of Health in its program of co-operation with federal health and military authorities for the purpose of curbing venereal disease prevalence, became effective July 1, 1919. Under these regulations venereal disease cases are reportable direct to the State Commissioner of Health, instead of to the local health officer. With the establishment of effective local health departments in the state, it is probable that venereal disease reporting will be placed on the same basis as that of other diseases, with notifications to be submitted to the local health commissioner.

Thirty free venereal disease clinics are in operation in various cities of the state. Up to December 1, they had treated 39,293 cases. Quarantine orders issued by the State Department of Health to the same date numbered 928. Quarantine is being employed as a method of control only in Cleveland, Akron and Cincinnati, as these are the only cities which have provided facilities for the detention of patients dangerous to the public health. Quarantine was practiced in Chillicothe through June, 1919, but has since been discontinued with the decrease of military activity at Camp Sherman.



# THE CANCER CAMPAIGN

This department was inaugurated in the October issue by the State Association's Committee on Control of Cancer for the purpose of keeping the profession in touch with the intensive campaign it has undertaken with a view to curbing the cancer menace. As part of the movement members of the committee have personally addressed, or have secured speakers to address a large number of county societies on this subject. If societies which have not devoted a meeting to the cancer question during the fall or winter, but are desirous of doing so, will communicate with State Association headquarters, naming a suitable date, the committee will arrange for speakers. The current paper is the fourth of a series prepared by Dr. Crotti to emphasize the fundamentals in cancer diagnosis and treatment.

## COMMITTEE ON CONTROL OF CANCER



Andre Crotti, M. D., Chairman  
Columbus

Chas. W. Moots, M. D.....Toledo

Chas. E. Holzer, M. D., Gallipolis

Don K. Martin, Secretary  
Columbus

## Cancer of the Breast

Andre Crotti, M. D., Columbus  
Chairman Committee on Control of Cancer

Like cancer of all the other organs, cancer of the breast begins as a local disturbance and only subsequently spreads. Although in the ultimate stage it may be all cancer, the whole breast does not transform itself into cancer from one day to another. Cancer invariably begins at some definite, minute point in the breast; it is only as a final result that the breast becomes all cancer, a condition reached by a progressive invasion of all the breast tissue by the cancer cells.

That a cancer may start simultaneously in more than one point in the same breast is shown by a case of chronic mastitis which I operated, and which contained two small, hard nodules, each the size of a small pea, with an interval of about two inches between them. The microscope showed these two nodules to be malignant.

The rapidity of the growth of cancer tissue depends upon conditions that may be both local and general. For instance, cancer associated with pyogenic invasion of a lactating breast in young women progresses very rapidly and usually kills the patient in a few weeks. This form of cancer is known as the *mastitis carcinosa*. On the other hand, in elderly women the growth of cancer tissue may be slow and may interfere very little with the general welfare of the patient. I have in mind a woman, eighty-four years of age, who recently died of cancer of the breast of nine years' duration. Of course, this cancer was of the scirrhus type.

### **PATHOLOGY**

Cancer in the breast seems to stimulate a slow but progressive production of connective tissue and the amount thus produced will impart to the cancer a character of its own. If abundant, we shall have a hard cancer, the *scirrhus* cancer; if scant, the epithelial cells being abundant, we shall have a soft tumor, the *medullary* cancer.

Critical examination of the extensive nomen-

clature of the various forms of cancer of the breast show that the following pathological varieties will fulfill all the desiderata and simplify matters considerably:

*Medullary Carcinoma*—Usually of large size, the cells very soft and numerous, while the amount of connective tissue is scant; its growth is rapid.

*Scirrhus Carcinoma*—Usually small, hard, and composed mostly of connective tissue. Its development is slow.

*Ordinary Carcinoma*—In this form of tumor, the most common of all, the amount of connective tissue and of parenchyma is about equally divided.

*Adeno-Carcinoma*—This name does not signify that the cancer cells have taken their origin from the cancer tissue, but it is so called because it maintains a more or less distinctly glandular appearance throughout its entirety. This character obtains in both the primary tumors and their metastases.

*Galatinous Carcinoma*—In this form of cancer both the epithelial and connective tissues show a marked mucoid degeneration. Pockets are formed, containing more or less clear, viscid, yellowish or colorless jelly-like collections of a slimy and sticky character. The cause of this mucoid degeneration is not known.

*Squamous-cell Carcinoma*—Squamous cell carcinoma usually takes its origin in the nipple and the areola, or from the squamous epithelium of the milk ducts. It is a rare disease and diagnosis is usually made only by the aid of the microscope. It is usually superficially located in the breast, but it may be also deep-seated.

Other varieties of cancer as "Cancer en cuirasse", Paget's Disease, mastitis carcinosa, etc., are not real pathological entities, but rather clinical varieties of the above forms of cancer.

"Cancer en cuirasse" is applied to that super-

ficial form of cancer involving extensive areas of the integuments of the chest, back and shoulders.

Paget's Disease is a rare condition involving the nipple. It is of superficial nature and is always preceded by a chronic, moist dermatitis of the eczematous type, lasting usually for years before cancerous degeneration takes place.

Mastitis carcinosa shows a rapid and painful enlargement of one or both breasts. The gland becomes reddened, hard, and edematous, and may show pseudo-fluctuation. This condition usually appears soon after parturition or even before, and is often mistaken for an acute mastitis. The mass is infiltrated with small, localized abscesses. The progress of this condition is rapid. Cachexia and metastases follow quickly and usually the patient dies in a few weeks.

In rare cases a typical carcinoma may be associated in the same breast with a typical sarcoma, under which condition the patient is doubly exposed to metastases taking place through the hematogenous as well as through the lymphatic route.

#### METASTASES

In cancer of the breast the most common avenue of dissemination of the cancer cells throughout the organism takes place through the lymphatic route. Consequently, in the great majority of cases, the first organs involved in cancer of the breast will be the axillary lymphnodes. When that is the case, we have the first tangible demonstration that cancer is out of its bounds, a fact which casts a gloomy outlook upon the future of the patient.

Involvement of the pectoralis major and minor is rare, but nevertheless occurs in a few cases; the same is true for the latissimus dorsi and some of the digitations of the serratus magnus in cases of tumors of the lower and outer quadrant of the breast. Metastases may follow the lymphatic vessels leading to the axillary space, and from there into the supraclavicular space, thence, into the mediastinal lymphnodes. Metastases may take place, too, by following the lymphatics traveling directly through the intercostal muscles and leading into the mediastinal lymphnodes. Finally, metastases may take place by the epigastric route through the lymphatics going from the breast to the epigastrium, and then following the peritoneal lymphatics communicating with the chest.

In some rare instances metastases seem to take place through the hematogenous route and in such cases the axillary lymphnodes may not be found involved, although a large dissemination of cancerous tissue may be found in other organs. This condition, however, is not frequent.

As the cancer cells grown *in vitro* exhibit amoeboid movements, Handley maintains that cancer of the breast spreads from the primary tumor centrifugally in all directions along the lymphatics of the deep pectoral fascia. This process is known as the *lymphatic permeation*.

How soon does dissemination of cancer cells throughout the body take place? Undoubtedly, very early. According to Fink, it takes place as early as the sixth month, and after the thirteenth month it is constant. The tendency to metastasize varies according to the type of tumor involved, the medullary carcinoma, being, of course, more readily apt to cause metastases than the scirrhus type. Furthermore, other factors, as traumatic injury and age of the patient, may intervene; the young, stout woman is more apt to show early metastases on account of the richness of her lymphatic system and its increased physiological activity. Why metastases take place is not known.

The blood seems to have the property of destroying cancer cells, while sarcoma cells thrive readily in it. This is true not only for human beings, but for animals also. Metastases in bones are comparatively frequent in cancer of the breast.

#### AGE AND SEX INCIDENCE

The age of incidence of the maximum number of cases of cancer of the breast is about forty years. To believe, however, that because a woman is below that age she is not likely to have cancer of the breast, would be a gross mistake. Cancer of the breast may occur even in young women and young girls, especially at the time of puberty, and if we remember that one out of every seven women under thirty-five years of age with a breast tumor, is suffering from cancer, and one out of every three women under forty years of age with a tumor of the breast, has cancer, we see that the frequency of the malignant tumors compared with the sum-total of tumors of the breast is such that the only safe rule of practice is to consider every tumor malignant until it has been proved otherwise by operation and microscopical examination. As the most favorable time for the development of cancer of the breast is within two or three years after the establishment of menopause, we may conclude that middle age and menopause are the two most important contributing factors toward development of cancer of the breast. Traumatism seems to play an active role in certain cases in producing cancer.

Two per cent. of all the neoplasms of the breast occur in men.

#### GENERAL SYMPTOMATOLOGY

In the great majority of cases pain, local or referred, does not exist with an initial cancer; it is only when cancer has progressed beyond a certain stage that pain is complained of. Although in some rare instances, pain seems to be one of the first symptoms which the patient complains of, it is the last symptom one must look for in diagnosing an early cancer.

The most common site for both malignant and benign tumors is the upper, outer quadrant of





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the breast, the other quadrants are comparatively less frequently involved.

The visible pitting of the overlying skin is one of the early signs, although when present must be considered as a late symptom from the prognostic standpoint. Dimpling of the skin is due to the shortening of the fibrous trabeculae on account of their invasion by cancerous cells. Retraction of the nipple is also a late symptom from the prognostic standpoint. It is caused by the shortening of the trabeculae of the milk ducts and peri-connective tissue. Discharge from the nipple may occur in from three to five per cent. of the cases of carcinoma of the breast. It is usually due to cancerous involvement of the milk ducts, but may also be due to inflammatory changes taking place in these ducts.

When the whole axillary space has become blocked by carcinomatous lymphnodes and the lymphatic as well as the venous circulation in the arm has become impaired, a distressing condition known as the *brawny arm* sometimes follows. The whole arm, hand and fingers become swollen to many times their normal size; pain may be quite marked; the function is almost totally suppressed. This same condition may be observed, too, soon after radical amputation of the breast, or many months after.

#### PROGNOSIS, DIAGNOSIS AND TREATMENT

If radical operation is performed before the axillary involvement has taken place, about eighty-five per cent. of cures can be counted upon. But as soon as even only one axillary lymphnode is involved, the percentage of cures drops down to twenty-five and even much less according to the degree of dissemination of the cancer cells. Fully one-half of the cases that come to operation too late, come late because they are being watched by their home doctor. To wait for dimpling of the skin to appear, for retraction of the nipple to take place, and for the axillary lymphnodes to become involved, is to wait until it is too late. If that is the case, what then are the signs upon which we will have to rely in order to make the diagnosis of malignancy in its incipency? The physical characteristics of the tumor are about the only ones.

Cancer forms a lump that can be plainly felt in the breast tissue. It is hard in consistency, of rather nodular surface and its limits are diffuse; that is, the boundaries between the normal tissue and the cancerous growth are not sharply defined, as for instance, in the fibro-adenoma of the breast. Instead of being movable by itself, like encapsulated fibro-epithelial tumors, the cancerous growth is a part of the breast itself. This feature, however, is not only true for cancer of the breast, but it is also true for chronic mastitis and often for the cystic malady of the breast as well. In fact, it is impossible to make a positive statement as to the incipient malignancy or non-malignancy of these conditions. A well-defined, encapsulated fibro-adenoma is possibly the only

condition which may be diagnosed with apparent certainty as non-malignant, provided, however, that carcinomatous degeneration has not begun to take place.

The cystic malady of the breast is potentially, if not actually, malignant. The malady affects the breasts of women at an average age of forty years, and may involve one or both breasts; examination reveals a tumor in the breast, diffuse in its limits, containing in turn harder and softer nodules, sometimes showing an unmistakable fluctuation. Pain, local or referred down the arm, is often present. No dimpling of the skin, no retraction of the nipple, no axillary involvement are found.

In view of these considerations what is the conclusion to be drawn? One, and only one. Knowing that over three-fourths of all breast lesions are malignant in the beginning, and that at least one-half of the remainder will become so, fibro-adenoma of the breast, chronic mastitis, cystic malady of the breast, etc., must be considered as pre-cancerous lesions and ought to be removed. In fact, any lump in the breast ought to be regarded as a potential cancer and consequently is surgical. Under such conditions the operation is simple, non-mutilating, and the death-rate is practically negative. Even in well established cancers the immediate death rate does not exceed much over one per cent. Surgery in breast pathology cannot be resorted to too soon, exception being made, of course, for certain conditions following parturition.

Pastes, ointments, etc., are a criminal waste of time.

X-rays and radium cannot be resorted to except in inoperable cancers as palliative measures.

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#### DR. SOUTHER ELECTED

At the twentieth annual convention of the Ohio Valley Medical Association held in Evansville, Indiana, November 12, resolutions were passed urging national and state education along the line of a universal system of physical education. Among officers elected to serve during the ensuing year Dr. Charles T. Souther of Cincinnati, was chosen vice-president.

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#### PHYSICIAN WANTED

The village of Birmingham (Guernsey County) and the surrounding community has asked THE JOURNAL to assist in securing a physician for that district. A petition signed by 112 representatives of families residing in and near the village, forwarded to the Columbus office as evidence of the sincerity of the request, shows that these families are from six to 15 miles distant from the nearest physician. Inquiries should be directed to F. Ray George, R. R. 1, Gilmore, Ohio.



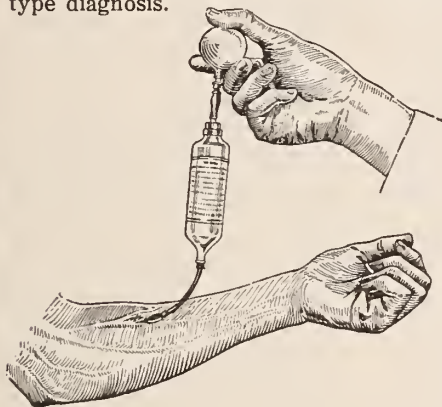
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## House-Cleaning to Rid Ohio of Quackery Goes On Apace Under Talley Act---Other Purgative Measures Taken by Medical Board

The "teeth" in the Talley act are fully erupted and have started illegal practitioners in Ohio on a retreat that should rival that made by the crown prince toward Berlin some fourteen months ago.

At the request of the attorney general's office, which serves the state medical board in the enforcement of medical practice laws, prosecutions under the Talley act were withheld for a time, pending the outcome of a suit instituted by the chiropractors in Cleveland to test the constitutionality of the law. The suit was heard in the Common Pleas Court of Cuyahoga County in September by Judge Estep, who subsequently rendered a decision sustaining the constitutionality of the measure.

Despite Judge Estep's decision, an erroneous idea seems to have prevailed among prosecuting attorneys in certain sections of the state, that a temporary restraining order against any prosecutions for illegal practice of medicine under the Talley act and other related sections of the medical practice act had been issued by the attorney general's office. This idea originated through incorrect information that a temporary restraining order had been issued in the chiropractic suit of Williams vs. Scudder in the Common Pleas Court of Cuyahoga County.

A communication from Attorney General Price to the state medical board in early December denies that any restraining order is now, or has been granted in the Cuyahoga County case or any other case enjoining such criminal prosecutions. Explanation is made that when the petition was filed in the Williams-Scudder case it was understood that an application for such an order would be made, and on that understanding there was a "gentleman's agreement" that until the application could be heard the attorney general's office would not institute or prosecute any such case. When the expected application was not filed within a reasonable time the attorney general's office properly refused to construe the agreement as binding it to refrain from further prosecutions. The communication to the board emphasizes the fact that the agreement referred to was only contemplated, and that no restraining order or agreement made by the court or entered into by the attorney general's office in any way conflicts with the statutory right and duty of the state medical board to institute proper criminal prosecutions against violators of the law.

While refraining from prosecutions in the period during which the suit to test the constitutionality of the Talley act was pending, the board proceeded with the collection of a mass of evidence which has since resulted in conviction of twelve violators, with thirteen others awaiting trial. That the house-cleaning started by the board will reach all sections of the state is in-

dicated by the fact that the pending cases are well scattered throughout Ohio, including such cities as Cleveland, Lorain, Akron, Fostoria, Fremont, Circleville, Lima and Loudonville.

Convictions under the Talley act up to December 15 include:

Mike Klotz, Akron, convicted of illegal practice of medicine on July 16.

A. W. Tiddlebaum, Cleveland, convicted of illegal practice of medicine July 22.

W. G. Hamlin (M. D. not registered in Ohio), Bloomdale, convicted of illegal practice of medicine July 29.

W. B. Alter, Cleveland, convicted of illegal practice of medicine August 15.

Arthur Bugbee (unlicensed M. D.), Cleveland, convicted of illegal practice of medicine August 25. Sentence suspended provided he ceased practice.

George Matthieu (unlicensed M. D.), Akron, convicted of illegal practice of medicine, September 4.

Lazarus Vioran, Akron, convicted of illegal medical practice, September 11.

Julia Glovka, Cleveland, convicted on two counts for illegal practice of medicine, October 8.

Helen Platz, Cleveland, convicted of illegal practice of medicine, October 22.

Myrta P. Swingle (licensed mechano-therapist), Cleveland, convicted of illegal practice of medicine, November 14, and fined \$50.00 and costs.

Mary Faknor, Warren, convicted of illegal medical practice on November 20.

H. Linert, Cleveland, convicted of illegal medical practice, November 29, and fined \$100.00 and costs. A fine equipment of surgical instruments and medicines was found in Linert's home and produced as evidence in the case.

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Among other convictions secured by the State Medical Board, *not under the Talley Act*, was that of Laura May of the Little Mother Institute, Peru, Indiana, who pleaded guilty to an indictment of the Grand Jury of Wyandot County on November 17 and was fined \$75.00 and costs. Two other cases are pending against Laura—one before the Probate Court of Greene County and one at Ashland.

H. Ben Bolt, erstwhile Bellefontaine chiropractor, whose certificate was revoked by the State Medical Board, October 7, has left the state for more favorable quarters.

### PENDING PROSECUTIONS

Pending prosecutions under the Talley act are concerned with one physician and twelve unlicensed chiro's:

Theodore T. Jacobsen, M. D., under arrest on eight counts for illegal practice of medicine in



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Miami County. Cases set for trial December 15, 16, 17 and 18 at Troy. Jacobsen's license to practice medicine in Ohio was revoked by the board on October 3, 1916, on the charge of having professional connection with an illegal practitioner of medicine, he at that time being associated with the notorious advertising firm of "United Doctors."

L. A. Dillman, Leo E. Dillman, J. E. Menegay and Archie H. Bertie, all of Canton, unlicensed chiropractors, indicted for announcing themselves as practitioners of chiropractic before obtaining certificates from the State Medical Board. These worthy gentlemen jointly purchased nearly a half-page of space in the December 11 issue of *The Canton Daily News* to inform the public of the charge filed against them, which, they state, is evidently "a camouflage of the Medical Doctors, in an attempt to prevent the people from having the privilege of Chiropractic adjustments." After setting forth a portion of the indictment they attempt an evasive answer, and entirely disregarding the fact that the law requires the licensure of limited practitioners, ramble on to say "that we use absolutely no medicine; that we hold ourselves out to the public as absolutely non-medical practitioners; that we do not practice surgery, and that we do not 'treat ailments.' Chiropractic deals with the cause of disease which it has proven is nerve pressure at the spine in nearly every case of sickness. Effects are merely outward evidences of a cause, and they cannot be relieved until the cause is adjusted. We challenge our Medical Prosecutors to inform the people, whose tax money they are spending, whether this prosecution is really to 'protect the people,' as they claim, or to protect themselves. We are in business to make people well by a natural method, and if that method influences people to desert drugs and the knife, thus depreciating the financial incomes of some medical doctors, ARE WE TO BLAME? Our obligation is to the people." Oh, piffle!

L. Baugher and I. A. Coon, unlicensed chiropractors of Fostoria, indicted in the Mayor's Court for announcing or advertising themselves as practitioners of a limited branch of medicine, before obtaining certificates from the State Medical Board. Cases set for December 22.

W. T. Duff, unlicensed chiropractor of Lorain, indicted for announcing himself as a practitioner of chiropractic without having obtained a certificate from the State Medical Board. Originally set for trial on December 2 but postponed until later in the month.

W. T. Abell and E. W. George, unlicensed Cleveland chiropractors, charged with announcing themselves as practitioners of chiropractic before obtaining certificates from the State Medical Board. Cases set for trial in late December.

W. A. Bell and G. H. Bellinger, unlicensed chiropractors of Akron, against whom complaint was filed on December 8 for announcing and ad-

vertising themselves as practitioners of chiropractic before obtaining certificates from the State Medical Board.

An indictment against F. A. Doughty, unlicensed chiropractor of Wilmington, was postponed or continued for the reason that the prosecuting attorney was not aware of Doughty's present whereabouts.

At this writing indictments were being prepared against two unlicensed chiropractors at Fremont; Beem and Beem, unlicensed chiropractors of Washington, C. H., and six unlicensed chiropractors of Toledo—O'Neill and O'Neill, C. C. Rutledge, H. A. Rutschow, B. A. and Leona M. Gurden.

### Reciprocity Licenses

At a special meeting of the board held on December 3, certificates to practice in Ohio were granted to the following on the basis of reciprocity:

*Alexander Borland*, Meredith, New Hampshire. Graduate University of Louisville, 1905; intended residence, *Akron*.

*Lawrence H. Fitzgerald*, Oak Hill, West Virginia. Graduate University of Pennsylvania, 1917; intended residence, *Woodsfield*.

*Joseph Scott Goodpaster*, Owingsville, Kentucky. Graduate Louisville Hospital Medical College, 1908; intended residence, *Dayton*.

*Oscar Hayes*, U. S. Navy. Graduate Tulane University, 1903; intended residence, *Cleveland*.

*Edward R. Herrmann*, Fort Thomas, Kentucky. Graduate Illinois Medical College, 1907; intended residence, *Cincinnati*.

*Wellington B. Huntley*, Lowell, Michigan. Graduate University of Michigan, 1914; intended residence, *Akron*.

*William McDowell Johnston*, Emeigh, Pennsylvania. Graduate Jefferson Medical College, 1907; intended residence, *Akron*.

*Allen Malone Kilgore*, Memphis, Tennessee. Graduate Rush Medical College, 1918; intended residence, *Akron*.

*Roscoe G. Leland*, Kalamazoo, Michigan. Graduate University of Michigan, 1909; intended residence, *Columbus*.

*Harry M. E. Lowell*, Chicago, Illinois. Graduate Northwestern University, 1914; intended residence, *Hamilton*.

*Fowler Burdette Roberts*, Indianapolis, Indiana. Graduate Indiana University, 1917; intended residence, *Akron*.

*Joseph A. Schlernitzauer*, St. Louis, Missouri. Graduate St. Louis University, 1918; intended residence, *Steubenville*.

*Clyde Emil Watson*, Oxford, Ohio. Graduate Johns Hopkins University, 1910; intended residence, *Hamilton*.

*Almerin Webster Baer*, Butte, Nebraska. Graduate Rush Medical College, 1889; intended residence, *Akron*.



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## Brush Up by Answering Questions Submitted by the State Medical Board to Applicants for Licensure

The regular examinations conducted by the State Medical Board, December 2-4, were tackled by thirty-four physicians representing a score of colleges from throughout the United States.

Three Ohio schools—Ohio State University Medical College, Western Reserve University School of Medicine and Cincinnati Eclectic College—were listed among the alma maters of the applicants. Other schools included were Atlanta Medical College; Buffalo University Medical College; Chicago College of Medicine and Surgery; Columbia University; Hahnemann; Johns Hopkins; Jefferson, Meharry; McGill University Medical College, Montreal; Rush Medical College; Syracuse University Medical College; University of Louisville; University of Pittsburgh, and the medical departments of the Universities of Illinois, Pennsylvania, Vermont and Washington.

Here are the questions which the board handed to the prospective Aesculapii:

### PRACTICE

1. Give symptoms and treatment of gastric hyperchlorhydria. 2. Give symptoms and treatment of acute ileocolitis. 3. Give symptoms and treatment of acute catarrhal jaundice; differentiate it

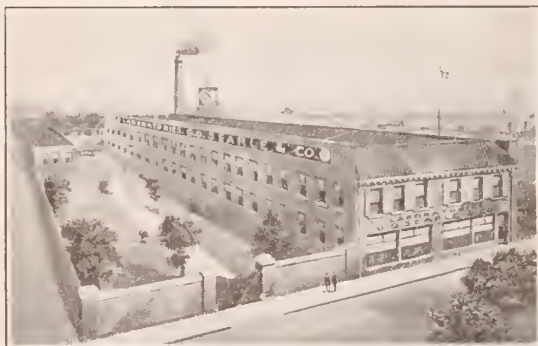
from other conditions associated with jaundice. 4. In what conditions does uremia occur; how would you recognize its occurrence and how treat it? 5. How would you recognize the occurrence of diabetic coma, and how treat it? 6. What is serum sickness? Give etiology and treatment. 7. Give symptoms and treatment of locomotor ataxia. 8. Give definition, symptoms and general treatment of typhoid fever. 9. Give symptoms of pericarditis with effusion. 10. Give definition, etiology and treatment of arterio-sclerosis.—S. M. S.

### CHEMISTRY

1. Describe briefly chemical analysis for potable water. 2. Describe quantitative test for sugar in the urine. 3. What are alcohols? From what made? Give formulae. 4. Give the general properties of organic compounds. 5. Briefly detail your analysis for marketable milk.—C. E. S.

### BACTERIOLOGY, PATHOLOGY AND HYGIENE

1. What is an autogenous vaccine and how obtained? 2. Give technic of obtaining a blood culture, and in what diseases is it of value in diagnosis. 3. Discuss the tuberculin reaction giving the theory of the reaction and technique of two methods in ordinary use. 4. Describe the most



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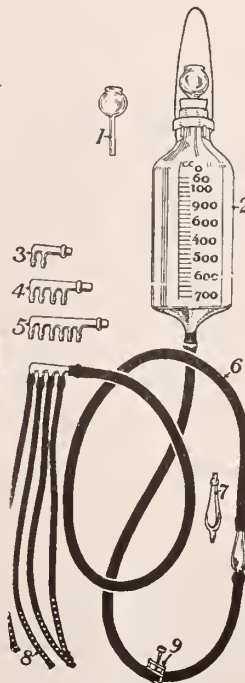
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common pathologic findings in diabetes mellitus. 5. Give the pathologic findings which may be found in syphilis of the central nervous system. 6. In what type of tissue does primary carcinoma occur? Sarcoma? Give illustrations of each. 7. Define active immunity, passive immunity, anaphylaxis, amboceptor, complement. 8. How would you proceed to locate the source of infection in an outbreak of typhoid fever in a community and what steps would you take to remove the source if found? 9. What would you do to check an epidemic of acute anterior poliomyelitis? 10. Give in detail the regulations you should enforce in a household to protect the family with a case of pulmonary tuberculosis.—J. H. J. U.

#### MATERIA MEDICA AND THERAPEUTICS (Regular)

1. Digitalis: Name official preparation, dose and therapeutic use, effect on heart and pulse, and when contra-indicated. 2. Write a prescription containing not less than two drugs for an adult suffering with acute dysentery, and give physiological action of each drug. 3. Name two principal serums and vaccines; now obtained dose; and mode of administration of each. 4. When would you use a cardiac stimulant, sedative and tonic? Name drug used and dose. 5. Name and give dose of two drugs belonging to each of the following classes: (a) cathartic; (b) diuretic; (c) expectorant. 6. Salicylate of sodium: Give the physiological action, use and dose. 7. Nux Vomica: Give therapeutic uses, principal preparations and dose of each, principal alkaloid and dose. 8. What are the principal iodine preparations. Give therapeutic use of each, and dose. 9. The preparations of opium and its alkaloids, indications for their use and dose of each. 10. Give the therapeutic uses of carbolic acid.—L. H.

#### MATERIA MEDICA (Homeopathic)

1. Give the physiological action of belladonna; discuss briefly, showing how this accounts for and explains many of the characteristic symptoms of the remedy? 2. What is the pathology present in the intestinal tract when Mercurious Corr. is the indicated remedy in a case of enteritis? 3. Give the indications for three remedies in Laryngismus Stridulus. 4. Give the characteristic symptoms of Mercurious Vivus. 5. Distinguish between gelsemium, phosphoric acid and byronia in typhoid fever. 6. Why is a knowledge of pathology, physiology, bacteriology and chemistry essential in order that scientific (i.e. Homeopathic) prescribing may be accomplished? 7. In the respiratory tract, compare the symptoms of phosphorus with those of byronia. 8. What do you understand by individualization of the case? 9. Enumerate the essential differences between the pharmaceutical methods employed by the Homeopathic school and those used in the United States Pharmacopoea. 10. Give the mental symptoms of hyoscyamus, pulsatilla, and phosphorus.—C. E. S.

#### MATERIA MEDICA (Eclectic)

1. Name the special sedatives. Give indications for two of them. 2. How treat a case of poisoning

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by corrosive sublimate? 3. Give indications for use, and dose of apocynum. 4. Name two hydrogogue cathartics, and usual dose. 5. What are the physiological effects of strychnine? Gelsemium? 6. Name three agents to increase perspiration. 7. Give the average dose of opium, cocaine, aspirin, strychnin-heroin. 8. Give the botanical origin of black cohosh, black sampson, purple fox-glove, yellow jasamine. 9. Name three agents you might use in influenza, with indications and dose. 10. Give the specific uses of byronia.—J. K. S.

## SPECIALTIES

1. Dermatology—Define infantile eczema and give treatment. 2. Syphilology—Name some indications of hereditary syphilis. 3. Eye—Define entropion and give treatment. 4. Ear—How would you treat furunculosis of the external auditory canal? 5. Throat—Diagnose acute laryngitis and give treatment.—S. M. S.

## DIAGNOSIS

1. Differentiate ulcer of stomach, gastric carcinoma, and cholecystitis. 2. Name and differentiate causes of acute intestinal obstruction. 3. Differentiate renal calculus and tuberculosis of kidney. 4. Differentiate concussion of the brain from fracture at base of brain. 5. Differentiate measles, scarlet fever and Rotheln. 6. Give symptoms and differentiate aneurysm and malignancy of mediastinum. 7. Diagnose acute poliomyelitis. 8. Give characteristic symptoms of dementia praecox. 9. Differentiate spasmodic and organic stricture of oesophagus. 10. Give early diagnosis of lobar pneumonia and pleurisy with effusion.—B. R. McC.

## PHYSIOLOGY

1. Why does the blood remain fluid in the body in life, and coagulate when shed? 2. What is understood by endocardiac pressure? 3. What changes are produced in the air and in the blood by respiration? 4. Describe the function of the ileocecal valve. 5. What is the effect of an excessive meat diet? 6. Describe the process of absorption by (a) the blood vessels, (b) the lymphatics. 7. What are ptomaines and how are they produced. 8. Define aphonia and aphasia. Give the cause of one of these conditions. 9. Describe urea, its occurrences, and variations in quantity excreted. 10. What are functions of the brain membranes?—J. K. S.

## OBSTETRICS

1. Diagnose and outline treatment for case of placenta praevia, where physician is called to case after mother is in labor. 2. Diagnose breech presentation, and give your management of the same in delivery. 3. What is the significance of albuminuria in pregnancy? Outline treatment of same. 4. Give the causes, diagnosis and treatment of uterine inertia. 5. Name some of the causes which predispose to hemorrhage after labor, and your management of same.—L. H.

## ANATOMY

1. Give the distribution of the fifth pair of nerves and their function. 2. Give the anatomy

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of the elbow joint and name the muscles and ligaments attached to same. 3. Locate the heart and describe the circulation to and from the lungs, to and from the liver. 4. Name the ductless glands. What is their function? 5. Describe minutely the anatomy of the lungs. How is our oxygen obtained from the air?—T. A. McC.

#### SURGERY

1. Give indications for blood transfusion, technique, selection of donor, reaction and treatment of same. 2. Describe indications for and technique of subtentorium decompression operation. 3. Describe three pathological conditions diagnosed by means of the cystoscope. 4. Describe (a) preparation for other anaesthesia, (b) contra indication for ether anaesthesia, (b) contra indication for ether anaesthesia, and treatment of each. 5. Name and diagnose the different hernias of abdomen and pelvis. Describe technique of operation for femoral hernia. 6. Give the treatment for compound fracture of the leg in the lower third. 7. What are the indications for and the surgical procedure in empyema? A. What are the following: (a) Jacksonian epilepsy; (b) Graves disease; (c) Volimann's contracture; (r) Brodie's abscess; (e) Meckell's diverticulum; (f) Pott's disease. 9. Given a case of injury of the leg at the knee joint, demanding amputation, state location of amputation with reasons for selection. 10. Describe the diagnostic procedure leading to a recognition of osteosarcoma of the upper extremity of the tibia.—Drs. Sawyer and McClellan.

Twelve osteopaths and three midwives also appeared for examination, and sixteen osteopaths already holding licenses to practice in Ohio were examined in surgery in accordance with the provisions of the law passed last winter requiring licensed osteopaths to pass an examination in surgery given by the board before undertaking major surgery.

At the examinations held by the Nurses' Examining Committee of the board on December 9-10, 281 applicants appeared to qualify for certificates to practice as registered nurses in Ohio.

#### To Protect Ohio Miners

By the provisions of a law passed by the legislature last March, Ohio coal mine operators employing five or more men are required to have installed and in operation by April 30, 1920, wash houses for the benefit of their employees at the entrance to the mines. A sanitary survey of the mines made by Dr. E. R. Hayhurst of the State Department of Health, showed absence of a proper place for miners to wash and change from clothes worn in the mines to heavier street clothes, to be a potent cause for rheumatism, colds and pneumonia, and passage of the new law was, therefore, urged as a health measure to combat influenza and pneumonia which caused many deaths among miners last winter.

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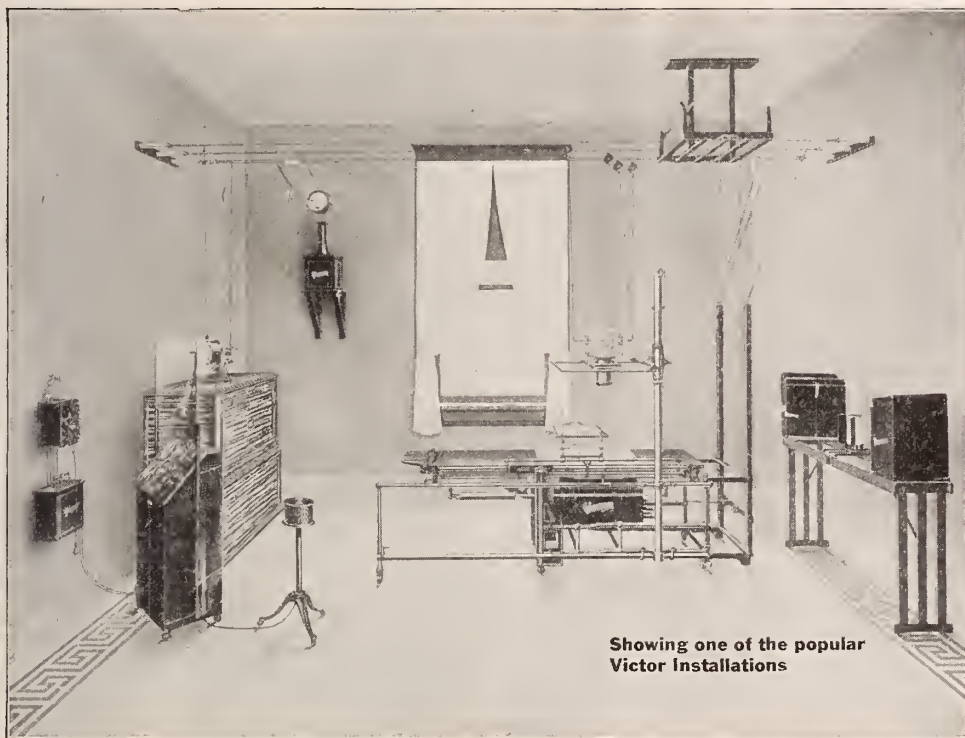
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## Medical Comment---Abstracts and Current Topics of Interest

(F. H. McMechan, M. D., Medical Editor)

### The Local Treatment of Erysipelas.

IN THIS connection, it is of interest to mention a communication, by two French army surgeons, (*Le Monde Medical* for April), in which they refer to some work done by Walther and Touraine, concerning the disinfection of the skin with tincture of iodine. In accordance with certain theoretical considerations, which it hardly is necessary to repeat here, it is quite logical to suppose that whenever tincture of iodine of suitable strength, is applied to the skin in sufficient amount and at sufficiently short intervals, the development of the streptococcus is likely to be hindered or even arrested, so that the erysipelas-process may be expected to cease to spread.

Experience has confirmed this *a priori* view in a very encouraging manner, since, out of nine cases of surgical erysipelas treated by the French surgeons referred to, six ended in complete recovery, although some of them were very severe and had resisted all the customary methods of treatment.

The authors use the tincture of the French codex, *once diluted*, which means a dilution of 1 : 20.

THIS tincture is applied, not merely to the erysipelatous patch, but, *far beyond* it on the

healthy skin. Only one coat of the tincture is applied; but, the painting is repeated three times during the first twenty-four hours and is continued for several days, if need be. Between applications, the lesion is covered with a dry aseptic dressing.

Within a few hours after the first application, there was observed a marked relief of the pain that usually is present, the cause being the distention of the meshes of connective tissue, especially in the raised margins. This raised margin soon subsides. Indeed, after the third or fourth painting, the extension of the lesion is arrested, the glandular enlargement and sensitiveness disappear, the fever falls, by lysis in the course of two or three days. Delirium, insomnia, restlessness subside, and copious diuresis marks the entrance of convalescence.

The authors refer to the experience of the surgical service in Val-de-Grace, where, among face-wounds, there are numerous cases of surgical erysipelas. However, thanks to repeated extensive painting with tincture of iodine, no case of contact-infection has been witnessed.

The authors add that no injurious effects have been observed after the use of tincture of iodine of a strength of 1 in 20.

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### Preble County Revises Fee Schedule

Secretary S. P. Carter of the Preble County Medical Society has favored us with a copy of the revised fee schedule which was adopted by his society November 25 and became effective December 15, after receiving the personal indorsement of each member. The schedule is very complete and we publish it herewith, believing that it will be of value to other societies, especially those in rural districts, which contemplate the arrangement of new schedules in the near future.

#### GENERAL PRACTICE

Office calls.....	\$1.00 and up
Visit in town.....	\$2.00
Visit in country add to above per mile.....	\$ .50
Additional patient in family.....	\$1.00
Visit after night from 8 P. M. to 7 A. M. extra .....	\$1.00
Way call .....	\$2.00
Consultation.....	\$10.00 and mileage
Complete physical examination.....	\$2.00 to \$5.00
Examination for life insurance, minimum.....	\$5.00
Gonorrhea, first fee in advance.....	\$10.00

#### OBSTETRICS

Ordinary case in town.....	\$20.00 to \$25.00
Ordinary case in country.....	add mileage
For instrumental delivery, add to above.....	\$10.00
Miscarriages, same as ordinary labor.	

Curettage .....\$25.00

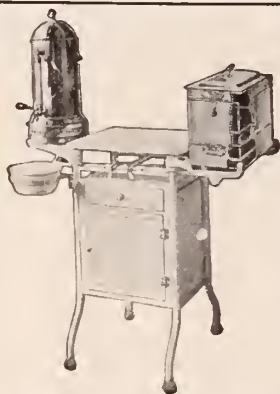
Visits after confinement, regular rates.

#### GYNECOLOGY

Vaginal examination.....	\$2.00 to \$5.00
Treatment thereafter .....	\$2.00

#### SURGICAL OPERATIONS

Administration of Anaesthetic.....	\$10.00 and mileage
Amputation of finger or toe.....	\$15.00 to \$25.00
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Hernia taxis.....	\$5 to \$10
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Removal of polypus from nose.....	\$10 to \$25
Paracentesis Thoracis, or Abdominalis.....	\$10 to \$25
Sounding male urethra.....	\$2 to \$5
Opening superficial abscess.....	\$2 to \$5
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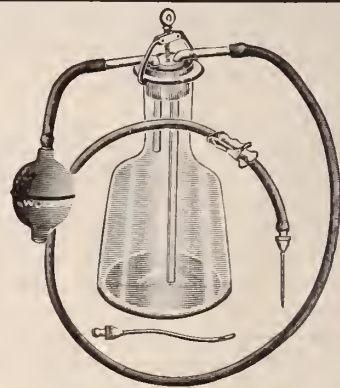
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Unusual detention should be computed at \$1.00 per hour, and should begin in labor cases, after 5 or 6 hours.

## OHIO PUBLIC HEALTH NOTES

—The Cincinnati Board of Health has increased the salaries of Dr. William H. Peters, health officer, and Dr. O. M. Craven, assistant health officer, from \$4,500 to \$6,000 a year and from \$2,500 to \$3,500 a year, respectively.

—"When an employer establishes a department of industrial medicine in his plant it is not charity toward his workmen—it is a cold business proposition. Instead of feeling proud of his kind heart, he should be thankful for enough horse-sense to enable him to see a profitable idea." Thus Dr. Otto P. Geier of Cincinnati summarizes the movement that has resulted in establishing a Department of Industrial Medicine in the University of Cincinnati. Thirty local physicians interested in the practice of industrial medicine recently organized as the Cincinnati Association of Industrial Physicians to cooperate in the establishment of the new course.

—Don't run your automobile engine in the garage unless you have the garage door open or have the exhaust connected with an exterior outlet. This annual caution, designed to guard Ohioans from asphyxiation by carbon monoxide in the engine gas, has been sounded by the State Department of Health. A number of deaths from this cause occur every winter, but their frequency at this season is greater because of the tendency to keep garages closed.

—Examination of fifteen brands of ripe olives for botulinus and other anaerobic bacteria by the Cincinnati health department failed to reveal the presence of the bacillus botulinus. Animal inoculation tests were likewise negative, and to confirm the tests, the chemist reports having eaten several olives of each brand examined and experienced no ill effects.

—"Health Centers: A Field for Red Cross Activity," is the title of a pamphlet published by the Red Cross as a preliminary and general statement of a part of its peace-time public health program. The organization plans to offer its services in assisting the establishment of health centers in communities in which they are needed.

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## Creation of Special State Commissions Criticised in Report on Ohio Health and Old Age Insurance Commission

Social welfare workers in state employ are roundly scored by H. E. McCollister, state examiner, in a report which he has prepared for the state auditor's office after completing an exhaustive examination of the records of the Health and Old Age Insurance Commission.

The commission, which was created by special act of the legislature in March, 1917, to examine into the merits of health and old age insurance, was given \$25,000 for expenses, and spent the entire sum.

"There is much room for criticism of the manner in which the appropriation of \$25,000 was expended, and when considering the benefits to be derived by the citizens of Ohio, it is our opinion that the money thus expended is practically wasted," the report states.

Attention is directed to the fact that the commission was created for the purpose of making a study of health and old age insurance and *briefly* advising the legislature as to the advisability of passing measures for this provision, together with the cost and benefits of same. It submitted

a favorable report of 448 pages, bound in book form, containing many pages of figures and statistics and approximately 211,260 words. In addition to reporting to the General Assembly, the commission distributed 2,500 copies of the report and 10,000 summaries. It was the intention to distribute 5,000 reports but funds were insufficient.

In auditing the expenditures of the commission Mr. McCollister found little to commend and much to criticise, declaring that several of the bills paid came close to being illegal, and that the appropriation had been expended in a careless and lavish manner and that many of the vouchers presented to the state auditor's office were paid under protest.

In addition to Mr. John A. Lapp, who was employed as director of investigations at a salary of \$5,000 a year, and Mr. H. R. Mengert, as secretary at \$30.00 a week, a corps of assistants was constantly employed as investigators, actuarial counsel, clerks, stenographers, etc. Instances were found in which some of these employees were



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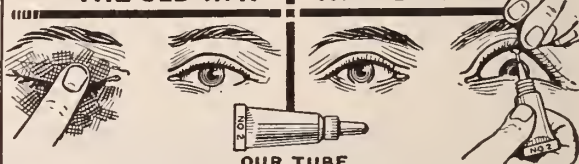
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paid for periods of service covering as much as half a month after they had severed connection with the commission, and in which actuarial counsel and investigators were paid for full-time service while holding positions elsewhere.

During the fifteen months Mr. Lapp's expenses amounted to \$1419.09. Although he was not officially employed as director of investigations until December 14, Mr. McCollister finds that he was paid \$150.00 as salary for the month of November and \$300.00 for December. He was also reimbursed for traveling expenses incurred in a trip made from Indianapolis to Columbus, October 14, when he made application for the position, and for two other trips made before he was appointed.

The examiner charges that Mr. Lapp devoted one-half of his time to private interests and that a considerable portion of his expense account was for trips to various parts of the country to fill speaking engagements, "none of which were of any benefit to the purpose for which the Health and Old Age Insurance Commission was created."

The act creating the commission provided that members should receive no compensation except actual and necessary expenses. Commendation is given Mr. W. A. Julian of Cincinnati, chairman of the commission, who attended 25 of the 32 sessions held by the commission, only one of which was held in Cincinnati, but who did not present an expense account of any kind.

In conclusion Mr. McCollister states that it is the purpose of the state auditor's department in setting out the facts disclosed by the report "to discourage the creation of commissions and appropriations of this nature, as it very rarely happens that the taxpayers derive any benefit and nothing tangible ever results."

The seven members of the commission, as originally appointed by Governor Cox, were W. A. Julian, Cincinnati; M. B. Hammond, T. J. Donnelly, Columbus; Dr. A. R. Warner, Cleveland; D. F. Garland, O. B. Chapman, Dayton, and D. R. Kennedy, Youngstown. The latter resigned soon after appointment and was succeeded by R. E. Lee of Akron.

When the legislature convened last January the commission presented a report recommending that Ohio adopt a system of compulsory health insurance. Six of the seven members concurred in recommending the *principle* of health insurance; the two labor members of the commission (Messrs. Donnelly and Chapman) refused to indorse the compulsory feature; and Mr. Lee of Akron, connected with the Firestone Tire and Rubber Company, opposed all recommendations for the adoption of any health insurance scheme and in his minority report recommended instead that the state devote itself to the development of disease prevention.

Despite its favorable recommendation, the commission made no attempt to push a health insurance bill at last winter's session, but recommended development of Ohio's disease prevention program through the enactment of legislation providing for extended health administration machinery. The specific recommendations made by the commission along this line later took form in the Hughes public health act.

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## OHIO HOSPITAL NOTES

—Hospital executives from various parts of Ohio gathered in Columbus, December 3, to discuss questions arising as a result of the enactment of the Kryder act which provides for the registration and classification of hospitals and dispensaries by the State Department of Health. Among speakers at the meeting were Dr. A. R. Warner, secretary of the American Hospital Association and former superintendent of Lakeside Hospital, Cleveland, and Senator Howell Wright, secretary of the Cleveland Hospital Council.

—A memorial tablet to the late Dr. P. S. Conner was unveiled at Good Samaritan Hospital in November. Dr. Conner was for forty years a member of the staff at the institution and was formerly dean of the Medical College of the University of Cincinnati.

—More than \$5000 was raised through a carnival recently for the benefit of the new Children's Hospital which is to be erected in Columbus. Six years ago a campaign for funds for the proposed hospital netted \$155,000 and this fund has been increased by careful investment. A site has been acquired, and completed plans call for the erection of a five-story brick building and a four-story service building.

—Commissioners of Sandusky, Wood, Seneca and Hancock counties, meeting in Fremont, November 25, reached no agreement on the proposal to erect a joint tuberculosis hospital, Sandusky county refusing to join with the others.

—Miss Clara Van Gader has been appointed superintendent of Lancaster Municipal Hospital. Since the resignation of Miss Catherine Rebman from that position, Miss Van Gader has been acting superintendent.

—At a recent meeting of the Fostoria Chamber of Commerce the need of a city hospital was discussed and a committee appointed to formulate plans for the organization of a permanent hospital to devise means of raising a building fund and later financing the proposed institution.

—The annual election of officers of the staff of Elyria Memorial Hospital resulted in the selection of Dr. S. F. Basinger as president; Dr. George Gill, vice-president, and Dr. C. O. Jaster, secretary-treasurer.

—A national survey of hospitals under the supervision of Rev. F. C. English, superintendent of St. Luke's Hospital, Cleveland, is part of the program of the Inter-Church World Movement, which held a conference in Columbus, December 1-3.

—An electro-cardiographic laboratory, under the direction of Dr. N. Worth Brown, has been established at Toledo Hospital.

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# Ohio State Medical Journal

Published monthly by

THE OHIO STATE MEDICAL ASSOCIATION

131 East State Street, Columbus, Ohio

Telephones: Ohio State 4905; Bell Main 5259

This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.

Issued under the direction of the Publication Committee.

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**Next Meeting of the State Association,  
Toledo, 1920**

## EDITORIAL COMMENT

by D. K. M.

### A Vital Policy Problem

That the medical profession of Ohio realizes that the proposal to inaugurate compulsory state health insurance is the most vital and fundamental problem confronting the profession at this time is indicated in the increasing number of programs being devoted to this subject by the various county medical societies and academies.

The proponents of compulsory state health insurance in this country have for some time indicated their intention of making either Ohio or New York the battle ground on which a test of this paternalistic innovation will be made. It is significant that the new governor of New York state was elected on a platform, one of the chief planks of which was the passage of such a measure in that state.

The report of the special committee of the Medical Society of New York, opposing the proposal and setting out in a concise way its objections, appears on page 107 of this issue and is of especial interest at this time.

Believing that the present bill pending in the Ohio Legislature to inaugurate such a system of state medicine here will not be a live issue at the present session of the legislature, the Council of the State Association at its January meeting by resolution authorized President Baldwin to appoint a special committee to survey the situation and make definite recommendations through the Committee on Public Policy and Legislation as the basis for action by the Ohio profession prior to the convening of the Eighty-fourth General Assembly next January.

This committee, of which Dr. J. H. J. Upham of Columbus, chairman of the Committee on Public Policy and Legislation, is ex-officio chairman, includes Drs. C. D. Selby, W. H. Snyder, Toledo; Otto P. Geier, Cincinnati; W. B. Chamberlin, Cleveland; C. H. Wells, Columbus, and J. C. M. Floyd, Steubenville.

The report adopted at a special meeting of the House of Delegates of the New York Medical Society on this subject advocates the greater development of existing agencies in preventive medicine together with extension on a large scale of the present county and municipal functions for both preventive and remedial medicine, including an extended utilization of the present institutional and clinical facilities for the diagnosis and treatment of disease in order to facilitate the access of the entire population of the state to modern methods in the practice of medicine.

The point is also made that in those countries where a health insurance system has been adopted it has caused a deterioration in medical morale and medical service without lessening the morbidity rate.

### Nationalization of Physicians

The political fallacy of subsidizing special groups or their nationalization is forcefully pointed out in an editorial under the above heading in *The Cincinnati Enquirer* recently in which the after-effects of state medicine under a system of health insurance are discussed:

"Even in staid England the nationalization idea grows apace. It is said there is a prospect in the near future of the medical profession in Great Britain becoming nationalized. Under this plan all doctors will be under the supervision of the state, paid by the state and their energies directed by the state. This arrangement will make physicians and surgeons public servants, as are army and navy officers and civil servants.

"This is another dream of the dreamers, and one which does not take into account the factor of individual preference or choice. The plan would reduce the practice of the profession to the level of a mechanical trade. It would include all hospital and institutional treatment, fettering with the detested bands of official red tape patients and physicians alike. It would detract from the individual interest and effort of the men of science in their work of laboring for the betterment and maintenance of the public health. It would antagonize the feelings and aspirations of the most self-sacrificing men in the world, and, worst of all, would reduce all professional activities to a colorless dead level which would entirely abolish all feeling and sympathy between doctor and patient.

"The nationalization idea is a phantasy. Carried to its logical conclusion it would strip the world of aspiration, human sympathy and healthy joy. This world does not wish to go clad in the same garments, wear one kind of hat, worship at a single altar, eat or drink by rule, work or play accordingly as the state shall direct. The opinions of the soul must be as free as those of the eagle in the upper ether or the soul must atrophy and die. No state can take charge of the intimate personal affairs of its people and make them either prosperous or happy. The doctrine of the state supreme is a false doctrine."

### Unity and Strength Essential

Under the strain of an active practice the individual physician is inclined to forget that the problems in medical practice are his own personally as well as those of the organized profession.

Undertakings and activities of your state medical association depend largely on your personal knowledge of its problems and your personal efforts in meeting them. *The Journal* is intended primarily as a medium of information on matters political, social and economic affecting medical practice.

Your efforts in your county society are not limited by the results of its local program of activities. Recommendations based on complete and

correct information will enable the medical profession of Ohio, as represented by the State Association, to accomplish those things most beneficial to the profession itself and to the public generally.

In addition to the good which your membership in the county society accomplishes, its direct benefits to you should be such that you cannot afford to be delinquent in the payment of your dues. Membership dues in the State Association were payable on or before January 1. Records in this office on January 16 showed that a total of 3343 were in good standing for 1920 at that time, as compared with a total membership of 4692 in 1919. On page 103 of this issue appears a membership statement showing the standing of the various counties just before this issue went to press. You should be interested personally in seeing that your county society reaches or exceeds the figures which are there shown for the past year.

The secretary-treasurers of the county societies are busy men, as you are. They will appreciate your co-operation in not waiting to be asked several times before paying your dues, provided you have not already remitted. After all, organization should be a matter of co-operation, not burdensome effort on the part of a comparatively few.

### Your County Society

As repeatedly emphasized, the effectiveness of medical organization as contemplated in the Ohio State Medical Association is dependent primarily and fundamentally on strong, active county societies whose efforts are reflected in a beneficial way throughout their respective communities.

Illustrating the fact that the medical profession in other states is confronted by similar problems and by the needs of effective co-operation and strong organization, the *Journal of the Medical Society of New Jersey* recently contained an editorial on county medical society activities which concluded as follows:

"The health insurance proposal, the increase of quackery and nostrums and other evils are threatening the standing, if not the very life, of the medical profession as an honorable and serviceable body. We therefore urge the taking up of our various county medical societies' work at once with greatly increased attendance, interest and efficiency, and that a determined, well-planned, persistent effort be made to bring into the society every qualified and honorable practitioner within the society's bounds. *We must have a far more thoroughly organized profession if we are to overcome the evils that threaten us.*

"We also urge prompt reports to *The Journal* of every meeting held. Otherwise we shall be tempted to infer that little is being done that is worth reporting. Most of the societies elect officers in October. We ask them to elect reporters who will report. That office is not a mere honor conferred to please the one selected; it is next to



that of secretary, the most important, and a good report of a society that is doing good work reflects honor on both him and his society. During the coming year we ask our readers to scan their society's records as they appear in *The Journal*, and to endeavor to give their reporter something to report that will show that the society is alive and doing its duty—increasing its members' scientific knowledge and transacting its business in a business-like way.

"We urge these matters knowing that we have a State Society whose record we have abundant cause to be proud of, but whose future depends largely upon the character, work and efficiency of our county medical societies.

"The secretary of every county society is urgently requested to send to the secretary of the State Society the names of all officers elected at their respective annual meetings, *as soon as possible after their election*. Failure to do so causes confusion in the work of the State Society and delays in correspondence with the county society, by the secretary and others."

### Our Latest Health Machinery

In spite of the fact that the Griswold law amendments to the Hughes public health code make optional with the district boards of health the exercise of most of the powers which were mandatory under the original code, eliminate all civil service provisions and leave the determination of the whole or part-time employment of the health commissioner to the local boards, Ohio may be said to still have the most modern and efficient health machinery in the country.

The effect of the new amendments adopted late in December following the unfavorable reactions against the financial provisions of the original law, will depend almost entirely on the attitude adopted by the various district boards of health. The people of any county can have just as good a health system as they choose to demand.

The chief danger in the new law, now effective, is the anticipated failure of a number of districts to take advantage of the opportunity to secure whole-time service in the employment of health commissioners or make other adequate provision for health supervision.

As the financial stringency in the various political subdivisions in Ohio is relieved it is expected that the various counties will gradually place in operation health administrations approximating the maximum provided under the new law.

Local health organizations of the larger cities under the new amendments will undergo little change. All municipalities of five thousand or over will constitute separate health districts. In the villages and townships of the counties the former organization ceases to exist and a general district board of health, elected by vote of the

village mayors and the township chairmen, takes its place in each county.

A progressive step in the right direction is the provision that all health commissioners, whether whole or part time must be licensed physicians.

A complete analysis of the new health code with its amendments appears on page 101 of this number.

### The Coming Annual Meeting

Plans are now in full swing for the "biggest, busiest, best" annual meeting of the Ohio State Medical Association—to be held in Toledo on June 1, 2 and 3.

Dr. John G. Keller of Toledo, chairman of the committee on arrangements representing Council, promises that the local committees in Toledo will have all details completed well in advance. Associated with Dr. Keller on the committee from Council are Dr. Charles Lukens, of Toledo, president-elect, and Dr. Wells Teachnor of Columbus.

The following are the chairmen of local committees which have been appointed by Dr. Keller:

Reception—Walter H. Snyder, M. D.

Entertainment and Meeting Places—C. W. Waggoner, M. D.

Badges—W. W. Alderdyce, M. D.

Exhibits—C. D. Selby, M. D.

Projection Apparatus—J. T. Murphy, M. D.

These chairmen will welcome suggestions and inquiries concerning the activities of their committees in arranging for the meeting.

### Thanks to the Press

A "thank you" letter addressed by Surgeon General Blue of the United States Public Health Service to the press, calls attention to the enormous saving of life represented by a reduction of the general death rate in this country from 17.6 to 14.2 during the past twenty years, and credits much of this substantial achievement to the dissemination by the newspapers of health educational matter. Had conditions of twenty years ago prevailed during 1918 some 350,000 more persons would have died than actually did die.

There is no doubt that the newspaper, reaching, as it does, all classes of our cosmopolitan population, wields a greater influence for good than any other agency. The Ohio newspapers have generously devoted their columns to matters affecting the public health, and we unite with the Public Health Service in thanking them. They are right after our own heart.

### A Physician's Creed

Whenever and wherever my work, by day or night, in peace or war, on land or sea, in laboratory or office, home or hospital, classroom or open field, may I be patient, poised and thorough; loyal to science and to men, unselfish in labor and pure in life. May I hold that science is better than gold, and men than greed, that service is proportionate to preparation, and reward to labor. May I use drugs only when indicated, diagnose before I treat or operate, clean before I deliver, use my laboratory, preserve a sense of proportion, respect but not worship my own opinion, seek consultation often, be slow to judgment and cautious in word and deed, and mingle in mind and touch with medical men. In the laboratory may I keep my records, in clinical cases my histories, and between them and me preserve the accuracy of truth. May I be strong with the weak, righteous with the wicked, wise with the foolish, honest with myself and kind to all men. May I avoid professional comparisons and sensitiveness, speak well of those of the household of medical faith, shun jealousy and eschew envy, follow progress, beware lest the demands of life chill my enthusiasm for study and knowledge, play sometimes and wander when I may. May I take injustice gracefully, disappointment easily, fight disease cheerfully, death hopefully, believe victory and defeat equally a part of the larger plan, and rise from both fresh for repeated conflicts. May I remember that I am an heir to the same diseases as my patients, must meet the same death, pass with them beyond the River, and may I go with a smile.—*Stewart Roberts, M. D., Wisconsin Medical Journal.*

### Industrial Commission Tests New System

The Industrial Commission has taken the initial step toward inaugurating a new method for handling claims under the Workmen's Compensation Act by placing in circulation among the larger manufacturing plants of the state a limited number of copies of Form C-1.

This form, intended for use only in those cases where injury causes a disability of more than one week, covers a statement of the injured employe, explaining the accident, a space for brief report by the attending physician and a space for the employer to fill out.

Under the new plan, which will doubtless be generally adopted as soon as its efficiency is tested, only one blank (Form C-1) will be required to establish a claim and initiate compensation, thereby expediting the payment of compensation to claimants and bills for services in connection with cases.

### The Economic Reason

The *Mt. Vernon Republican-News* drew a laugh from us by adding the following to the State Department of Health's good reasons why the bibulous should not indulge in wood or dena-

tured alcohol: "In these days when coffin handles are an extravagance it is unfair to the widow and heirs to put over obsequies on them without giving ample warning."

### "Political Therapeutics"

That lessons learned from the medical profession in the matter of thorough examination and correct diagnosis, followed by efficient treatment, may well be applied to political and industrial ills, was illustrated in an address delivered by Supreme Court Judge R. M. Wanamaker at the recent annual banquet of the Columbus Academy of Medicine on the subject of "Political Therapeutics."

"Quackery, superficial treatment, salve or plaster will not cure the deep-seated trouble with which Uncle Sam is now suffering," according to Judge Wanamaker.

The speaker advocated the establishment of courts of industrial justice before which should be brought parties to present industrial conflict and through which fair and full hearings with final adjudication, would protect the real party in interest—the public.

"Uncle Sam is sorely afflicted. His condition is aggravated by germs of foreign origin. There has been too much talk and too little action, while the patient languishes.

"Thorough examination and accurate diagnosis is needed. This requires a real physician—a real statesman, careful treatment, instead of chatter-box government," declared the speaker, who added that laws may eliminate the quack in medicine and the legal profession, but public opinion only can eliminate political quackery."

### An Active Legislative Committee

Much of interest, indicating a most active local legislative committee, is found in the annual report for 1919 submitted in January by Dr. J. E. Tuckerman, chairman, to the Cleveland Academy of Medicine. He outlines in detail the effective means of cooperation which were established with various other organized groups interested in welfare, health and the protection of the public, as well as methods of assisting the State Medical Board in the prosecution of offenders against the medical practice laws.

Dr. Tuckerman in his report points out that based on the importance to the profession in maintaining adequate contact with legislation through medical organization, the problems presented are of two characters: first, that which affects the safeguarding of public health, and second, that which has to do with the economic position of the profession.

Toward the first he declares that the profession should only take the position of advisor and should impress upon the legislators that it is their duty and not that of the profession to pass such measures as will safeguard the public. Toward the second insofar as it includes compensation



as distinct from the problem of public health, he emphasizes that the profession must be so organized as to be in a position to insist upon fair and adequate remuneration for medical services.

In connection with the proposal now under consideration by the Cleveland Academy for the employment of a full-time executive secretary to handle the details now over-burdensome when placed in the hands of elective officers, Dr. Tuckerman points out how such a plan would be beneficial in educational and legislative matters:

"Obviously a tremendous amount of constructive work could be accomplished if the chairman of our various committees had the services of a full-time executive secretary, ex-officio secretary of each committee after the manner of the plan that has proven so successful in the Ohio State Medical Association and has transformed it from a collection of divers and for the most part ineffective bodies into a live, compact, dynamic force.

"Certain it is that a continuous, adequate and consistent supervision and direction of local legislation affecting the profession cannot be carried out unless the Academy adopt the state plan of an executive secretary, establishes a permanent office and provides for the employment of an adequate office force."

#### A Tribute

A tribute to the late Dr. Christian R. Holmes of Cincinnati who died on January 9 and to the medical profession of which he was a foremost member appeared editorially in *The Cincinnati Enquirer* on the day following his death.

The editorial concluded with these words:

"He was a creator, a builder endowed with a constructive mind. He tore down only to erect more magnificently. He was an American citizen, a physician, a surgeon of rare skill, an executive of the highest order, a soldier of hardihood and courage, and withal a genial, kindly gentleman, whose companionship was a delight and whose confidence a privilege and a boon.

"The city of Cincinnati has lost a powerful champion who brought to it world-wide prestige as a medical center; the medical profession one of its most conspicuous and successful devotees, and humanity a friend whose heart beat always in measured cadence and sympathy with its needs, its desires, its frailties.

"Know ye not that there is a Prince and a great man fallen this day?"

#### Keep An Eye on Canton

Up in Canton there is a live-wire health officer, a co-operating medical fraternity and an appreciative public, and as a natural sequence a most progressive health program is under way in that city.

At the outset a clinic and dispensary for the benefit of those who are unable to pay for good medical advice and treatment was established. A governing board of three physicians is manag-

ing the clinic and local physicians are serving gratis as members of the staff which includes specialized medical, surgical, venereal, tubercular, eye, ear, nose and throat, gynecological, obstetrical, neurological, pediatric, and X-ray departments. The clinic was equipped through the generosity of public spirited citizens who hope that within a few years it will become the cornerstone of a modern city hospital.

In the same building with the clinic is a splendidly appointed medical library, the gift of a resident of the city to the medical profession.

Under the auspices of the city health departmental women of the city are learning the fundamentals of home nursing through a series of afternoon and evening lectures given in the schools by a faculty of eight physicians.

The local Red Cross is conducting classes in hygiene and home care of the sick for a large number of men interested in bettering health conditions in the factories of the city.

—The Alliance school nurse has recommended to the board of education that the teaching of sex hygiene to pupils between the ages of 10 and 12 years be included in the school curriculum of that city.

The Visiting Nurse Society has added to its already large program of work two additional services—an hourly service and a maternity service. The hourly service enables persons to secure a nurse, at a reasonable fee, for a certain number of hours daily or weekly, whereas the length of the visiting nurses' visits previously were from 15 minutes to an hour and a quarter. Heretofore the society's maternity service has been confined entirely to prenatal and postnatal visits but the institution of the new service now permits nursing care at time of birth.

The above constitute a minute part of a movement to make Canton the "healthiest and happiest city in Ohio."

Dr. John Kappelman is the health commissioner who is engineering the work and his able helpers are the Canton members of the Stark County Medical Society. They're determined to make the larger cities sit up and take notice.

#### Extensive Military Service

Dr. William H. Henry of Hamden, Vinton County, has a military record distinguished by variety and length of service. Serving as commanding officer of the American Hospital at Archangel, Russia, from August, 1918, to July, 1919, Dr. Henry had the unique honor of being the only Ohio physician to serve with the American forces in northern Russia. Following this he returned to the states for duty at the General Hospital at Fort Sheridan, Illinois, the largest general hospital in the country, remaining until December 26, when he started, via San Francisco, for Vladivostok, Siberia, where he is now serving with American forces.

## Bringing Health to the People \*

Lee K. Frankel, Ph. D., New York City

President of the American Public Health Association and Third Vice-President of the Metropolitan Life Insurance Company.

**Editor's Note.**—After all, as Dr. Frankel suggests the greatest of wars—that against disease—is still to be won. It is certainly a contrast to compare the wonderful record in the prophylaxis and elimination of disease in the world war with the efforts of earlier public health workers to achieve the same results in civilian life. Of course recent successes are based on the revolutionary discoveries of the germ causation of disease. Mortality rates are slowly being decreased and such previously prevalent diseases as typhoid malaria, and yellow fever are becoming extinct. Credit must be given not only to the heroes who sacrificed their lives in eradicating certain diseases, but also to the other untold thousands who have fought the good fight in behalf of public health. It is to be hoped that under the Griswold bill recently passed, a new spirit of responsibility for public health will be developed and that those who have the work in charge will have the backing of their communities and will be properly remunerated.

I DO not suppose there is any one in this audience who has listened to the remarkable exposition that Dr. Crile has just given to us, this thought-provoking, soul-stirring address, without having his blood tingle and without feeling uppermost in his breast that the war is over and the need for service of the kind Dr. Crile has described is no longer here.

I want to take the liberty of discussing with you in the next few minutes, for my remarks will be short, another war, a war that is not over, a war that has lasted not four years nor forty years nor four hundred years, but four thousand years, the war the end of which is not in sight, a war in which we are facing an enemy more ruthless even than the Hun, a war that requires our constant and eternal vigilance, and that will require for the years and the decades to come the best thought, the best mind, the best intellect of men like Dr. Crile and his contemporaries.

Needless to say that I refer to the war against disease; needless to say that I wish to speak to you today of what we here in the United States have attempted to do in this campaign, in this constant, eternal warfare for the last sixty or seventy years.

I take it to be the privilege given to a man whose hair tells the story of his age, as mine does, that I may have the right to be reminiscent and to go back to those early days of administrative public health and tell you again of those things that were attempted in the earlier part of this and the last century in this campaign to try and fight the enemy that has been with us eons and eons.

Viewed in the light of this paper that you have just listened to, of these wonderful and startling discoveries, it seems the wierdest kind of a contrast to realize what our confreres and our predecessors and your predecessors in the domain of medicine were attempting fifty, sixty years ago.

### SOME OPINIONS OF OTHER DAYS

Possibly nothing brings it out quite so startlingly, so strikingly, as the statement made by

Dr. Bowdich in the address which he delivered before the International Medical Congress at the Centennial Exposition in the year 1876, held in Philadelphia, in which he summarized the history of preventive medicine, and called attention to the fact that he had changed his theories. He mentioned the fact then and there that in the year 1858 he had conclusively proven to his own satisfaction that there was a distinct relation between the laws of soil moisture and land drainage and tuberculosis, or, as he called it at that time, consumption.

Possibly nothing is more striking than a paper read in 1881 by one of your former statesmen—possibly even now one of the members of your state—read before the meeting of the American Public Health Association, entitled "The Sunstroke Epidemic in the City of Cincinnati." It is interesting to observe, as Bowdich has, that even back in those early fifties, there were men of vision, there were men who saw the future. There were, for example, such men as Lemuel Chadwick, who submitted a report on Sanitary Inspection of the State of Massachusetts. It is an interesting commentary, if I may be permitted to say so, that he was a layman and not a physician.

Bowdich, in this remarkable address and historical sketch of his, makes the following comment: "I remember Mr. Chadwick well, calm in his perfect confidence in the future of preventive medicine to check disease. He walked almost alone the streets of his native city, not only unsustained by the profession, but considered by most of them as an offender for his earnest defense of what seemed to the majority of us physicians out of the layman's sphere, and, withal, of trifling moment compared with our usual routine of so-called practice.

"The public, ignorant of hygiene, treated him no better. The report fell, still-born, from the state printer's hands, and its recommendations were ignored."

More and more could I take up your time reciting incident after incident of the difficulties under which these men in the height of their enthusiasm and their desire to accomplish things must have labored. Much has been said to you

\* An address delivered before the general session of the Ohio State Medical Association, during the 73rd Annual Meeting, at Columbus, May 7th, 1919.



of the unpreparedness that we have met in this recent war. Can you imagine the pitiful unpreparedness of men whose unpreparedness was primarily the unpreparedness of ignorance? Can you imagine what must have been the feeling of health officials, of physicians, year in and year out, facing epidemics of typhus, of small-pox, of the other diseases that were so characteristic in those days, and not having at their command the knowledge to fight them and to prevent them?

#### REVOLUTIONARY DISCOVERIES OF THE EIGHTIES

We have this situation continuing right down through the years, until the year 1882, and then we have those wonderful discoveries that revolutionized preventive medicine, and in particular the administration of public health; those discoveries of Koch of the bacillus tuberculosis, and those other remarkable discoveries that practically substantiated definitely the germ theory of disease. I need not mention them to you men. Your acquaintance with them is infinitely greater than is mine.

#### REDUCTIONS IN MORTALITY RATES

I want to call your attention only for a moment, however, to the results of these discoveries in what they mean in reduction of death rates. In 1880, the mortality in the registration area from all causes of death was 19.8 per thousand. That death-rate was cut down, as a result of administrative efforts and as a result of these discoveries, so that in the year 1916, the general death rate was 14.0, a decrease of over five points.

The mortality from typhoid fever in the period from 1901 to 1905 was 32.0 per hundred thousand; in the year 1916, it was 13.3 per hundred thousand. And, isn't it interesting to note that this reduction in typhoid fever, due to the knowledge of the source of the disease, has come about largely through the purification of water and milk supplies. It was a city in this State, a city not long ago notorious for its high typhoid rate, that last year had the lowest typhoid death-rate in the entire United States. I refer to the city of Cincinnati.

Malaria went down in this period from 4.8, that is in the period from 1901 to 1905, to 3.0 in 1916; smallpox from 3.4 to 0.2, and today smallpox is practically becoming unknown in the United States.

The same may be said of other diseases—you know them as well as I do. The reduction in the death-rate from diphtheria and from the diseases of childhood, and in particular the reduction in death-rates for diseases of infancy has been remarkable.

Who is responsible for this? In addition to these men that I have spoken of, these great research students and scholars, who are the men to whom we are indebted for their labors in what forty years ago was still a virgin field? Are their names recorded in the Hall of Fame? Do they find places in the memory of the public

similar to those occupied by our great military leaders and our well-known statesmen? In a few instances the answer would be in the affirmative, but in the great majority of instances, the names of the men who experimented, who made the great discoveries in the eradication of disease are almost unknown.

#### THE GREAT UNKNOWN

I doubt whether one man in a thousand in the streets would know the discovery of the vehicle for the transmission of yellow fever, Dr. Walter Reed of the Medical Corps, United States Army, or of Carroll and Lazear. Probably not one in ten thousand knows more today about malaria than that it is transmitted through the mosquito. Who recalls the names of Sir Patrick Manson and of the younger Manson, who died as the result of the bite of an infected mosquito to establish the transmissibility of the plasmodium? And of Sir Ronald Ross and his epoch-making researches? Those deeds of heroism and of devotion to medical science, not exceeded by any in the recent war, are still unhonored and unsung by the great masses of people who have benefited by their labors.

I have said that the names of a few men are known, and that these names will ever be remembered,—names such as Sternberg, Gorgas and others will be handed down to posterity. There are, however, hundreds of others who have followed in the footsteps of these great leaders, whose praises have never been sung but who have worked faithfully, earnestly, honestly and unostentatiously for the improvement of health conditions in their respective communities.

#### THE GUARDIAN OF HEALTH

These men are the local health officers of your cities and towns, the health officers of your States, the men in the Federal service, statisticians, sanitarians, bacteriologists, chemists, laboratory men, industrial hygienists, sanitary inspectors, public health nurses, who, day in and day out, are acting as guardians of your health. Their work is not always pleasant nor under the most delightful conditions or surroundings. Some are inspecting sewers; others are watching the disposal of garbage; another group examines cesspools and privies. Some of these men are transferring to hospitals patients suffering from dangerous infectious diseases and doing this at the risk of their own health and lives; others, in their laboratories, are examining sputum and offal and pathological material, to find the causes of disease. Some are taking the dirt and filth from under your feet, the noxious air which you have breathed, the secretions which you have expelled, and have put these under the microscope, in the test tubes and otherwise subjected them to every imaginable examination and analysis, in the hope that future generations may no longer be subjected to suffering from these sources.

It is these men, thousands of them, in every

city, town, hamlet and village throughout the United States, working incessantly and self-sacrificingly, whose activities during the past thirty years have brought about these reductions in mortality and morbidity.

If I have seemed to rhapsodize over the work done by public health men in the United States during the last two or three decades, it is because I realize the comparatively slight appreciation that has been shown to this work by the public. This is not the fault of the health officer. Unfortunately, his daily task has little in it of the dramatic. His results are shown largely in cold statistical facts. These have no popular appeal. Now, a fire is dramatic; it appeals to the sight and to the mind; it makes its impress of fear. The long, licking flame tells its own story and the result is what might be expected. Even the smallest hamlet has its volunteer fire department. Larger cities make adequate provision for fire protection; yet health protection goes a-begging, and for no other reason than that those who are its votaries and disciples are inchoate and have not been able to dramatize nor visualize to the public the value of glowing, virile, redundant health.

#### THE LACK OF ADEQUATE HEALTH WORK

What is the result? Practically without exception, no city in the United States makes adequate provision for its Health Department. In many large cities, the per capita appropriation is as low as eight cents, as compared with two dollars for the Fire Department. Inadequate salaries are paid to health officers. The Health Department is in too many instances the football of politicians. The occupants of positions in the Health Department in too many cases have little or no technical knowledge and experience. The greatest assets which men have, and without which other possessions are worthless, are subordinated to other interests. It is the marvel of the situation that, notwithstanding the apathy and indifference of the public and its representatives, its law-makers and its legislators, there should have been such a marked improvement in health conditions in the last few decades.

#### POORLY PAID HEALTH OFFICERS

What is a test of the merit of health work in a community, and what is a test of the value which the community places upon its health officials? In order to determine this, I recently took a census of the conditions of health officers in seven hundred and eighty-six cities in the United States and Canada. I sent questionnaires to all of these men, asking them to advise me of their status, their salaries and certain other things about which I desired information.

Wartime conditions have, as you know, brought about not only an increase in the cost of living but an increase in wages. The average competent stenographer can readily earn twenty-five dollars a week, at least in New York. A good butcher

probably obtains more. In the skilled industries, wages above this amount are anything but infrequent. None of these trades require unusual training nor do they carry with them any important responsibilities.

Compared with these, what tale is told by the salaries, or rather wages, paid to the average health officer? Of the four hundred and seventeen men who reported, sixty per cent. received under twenty-five dollars per week. Of the total, only 36.7 per cent. are full-time health officers, and of these, twenty-five per cent. receive less than twenty-five dollars per week; 63.3 per cent. are part-time officers and eighty per cent. of these receive under twenty-five dollars per week. The average salary for the entire group was \$1,383 per annum. The minimum salary was \$50 and the maximum salary \$7,500. The minimum and maximum salaries for cities having a population of 75,000 to 100,000 and in cities having a population of 100,000 to 250,000 are the same, the minimum being \$1,500 and the maximum \$4,000. Apparently in these two groups there are no standards of salary based upon increasing size of cities and corresponding increase in duties and responsibilities.

If we study the data by geographic region, there are even more interesting anomalies. Some of our preconceived notions are overturned. We find, for example, that it is the South Atlantic States which rank first and show an average salary per annum of \$3,156, and sixty-two per cent. of full-time officers. As compared with this, the East, North Central States show an average salary of \$1,270 per annum, and twenty-six per cent. full-time men.

I could carry this further. I could show you, for example, that the apathy and indifference of communities is evidenced in still another direction. Practically every city in the United States of any size today requires that its public school teachers should have had ample preliminary training and has recognized this training by placing its teachers under Civil Service so that continuity of effort and permanency of position can be assured. The returns to the questionnaire show that only eighty-six out of four hundred and seventeen officers were appointed under Civil Service rule. Of these only forty were appointed for indefinite terms, based on good conduct. Fifty per cent. of all the men were appointed for less than two years. In cities of over 250,000 population, in which the complexities of the health problem in particular demand continuity of thought and action, only ten out of twenty-two officers were appointed for indefinite terms. These illustrations could be multiplied, but they would not bear more strongly on the point at issue.

#### RESPONSIBILITY FOR LOW STANDARDS IN HEALTH WORK

It would be idle to discuss here or to attempt to ascertain who is responsible for the fact that



health work is still at such a low standard in many communities. Indeed, there apparently are no standards. If the data submitted are of any value, they indicate that there is apparently little relation between the size of the community and its appropriation for health administration, judging the latter by the salary paid to the administrative head. If these salaries are indicative of the total appropriation for health work, the statement may probably safely be made that many cities still lack facilities for modern public health work, whose fundamental axiom is prevention of disease. There is probably still too much of the old idea prevailing that the health officer's functions are primarily the removal of nuisances and inspection of slaughter-houses and pig sties, and garbage disposal.

It seems to me that this is the problem which confronts you men as well as the rest of the community, with your professional training and your professional experience. *If we are to bring home to the public at large the value of health, it will become necessary for us to change our present policy in the United States with respect to the type of men whom we are placing in public office. We must realize that there is no other work in the community comparable to that of the health officer. We must realize that there is no work being done in any community, large or small, that vies in responsibilities with that of the health officer. I contend that the work of the lawyer, the work of the physician, the work of the minister and of the priest are secondary in importance to the preservation of the health of the community, and it is for that reason that we must find the means, through legislative enactment and through public opinion, to see to it that we obtain appropriations for health work, that we place on our statute books laws which will give us full-time health officers, that will enable us to give them adequate pay for the service which they render. And lastly, to see to it that we put into these positions men who have had the training and have fitness to assume the important responsibilities which become their daily task.*

If we are to bring all this home to the people of this country, we shall have to have men competent to handle the situation and backed up by your help and your aid, for without the work of the medical profession, the health officer is impotent.

If we are to bring home to the people of this country the things that they must do and the things that they should do, along the lines of personal hygiene, of developing in themselves that efficiency and that character and that strength that makes for good health, we must be able to put into local office men of the type I have just described, we must revolutionize the health administration in the cities, towns and counties of the United States.

#### A VISION OF THE FUTURE

Picture with me just for a moment—and I am

through—what may happen, should we be blessed enough to be able to meet here ten, twenty or thirty years from now. Can you picture with me, in view of all that has been accomplished by you men in the medical profession, by the laboratory men, by the sanitarians, by the bacteriologists, by the hygienists,—can you picture a condition that may exist if we put our shoulder to the wheel and attempt to bring about better conditions in health administration? You men, I think, are agreed with me that the time is coming rapidly when we shall know even more about disease than we do at present, we shall have wiped out not merely smallpox and typhoid and yellow fever and malaria, but I can see the vision of the future when we shall have wiped out even those common diseases like measles and scarlet fever and whooping-cough and mumps. I can see the picture of the day when we shall have discovered, through the instrumentality of some great physician and scientist, where lies the difference between tuberculosis as an infection and tuberculosis as a disease.

The day is coming—and that day in the not distant future—when we shall have tried to live up to that old biblical promise that a man shall live three score years and ten, when preventable diseases shall have disappeared, when through the efforts of public health officials, of medical men, of the medical profession, there shall come to all of us the only disease that any man has the right to suffer from, the disease of old age. And we all of us will look back in those days, sitting as we shall probably under the beneficence of our modern institutions, under our own vine and our own fig-tree, with poverty eradicated, with preventable disease gone—with none to make us afraid, and be able to say, in the words of Robert Browning, in that wonderful ode of his, "Pippa Passes"—"God's in his Heaven; all's well with the world."

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*The Prevention of Simple Goiter.*—O. P. Kimball, J. M. Rogoff and D. Marine publish their third paper on the effect of sodium iodid in the prevention of goiter in school children. They conclude that simple goiter in man may be prevented and that the method may be carried out as a public health measure. Two gm. of sodium iodid given twice yearly seems adequate for the purpose.—(*Jour. A. M. A.*, Dec. 20, 1919, p. 1873).

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*Lubricating Jelly.*—The subjoined formula for an inexpensive lubricating jelly has been used in the German Hospital (now the Lankenau Hospital), Philadelphia, for a number of years: Tragacanth, whole, 3 gm.; glycerin, 25 cc.; phenol 1.5 gm.; distilled water to make 300 cc. The tragacanth is broken in small pieces and put into a wide-mouthed bottle; the other ingredients are added and the bottle is frequently shaken.—(*Jour. A. M. A.*, Dec. 13, 1919, p. 1852).

## Medical Service with the Rainbow Division\*

Harry D. Jackson, M. D., Cirjevilic,

Late Major, M. C., U. S. A., 166 Infantry

Editor's Note.—It is interesting to realize with Dr. Jackson how thorough the immunization against typhoid, para-typhoid and smallpox resulted in the prevention of these diseases in the Army under the worst service conditions, and at the same time to note the immediate prevalence of dysentery among troops wherever they took over the vermin ridden and fly-infested trenches of the Huns. This incident of Army experience goes far to show the vital truth of the public health slogans, "Swat the Fly" and "Clean up and Keep Clean." Dr. Jackson's contribution shows how much the war has done in giving so many physicians their Master's Degree in Medicine. He carries you from the rear to the front and back again through all the fighting of the Rainbow Division and it is remarkable how well the Medical Service did considering the difficulties of transport, shortage of supplies and exigencies of battles. Some of Dr. Jackson's impressions of service are very vivid and touching.

IT is not the purpose of this paper to discuss War Surgery—this subject, if we read our medical journals and the current literature of the times, is well taken care of by others and what I might say here would only repeat in a less able way the things that have been said. The accomplishments of surgery toward the conservation of life and future usefulness have, beyond question, been greater during the past five years than in any like period in the history of the world. Even as general practitioners, we are bound to be interested and to take pride in these new things as having come from our profession.

As I say, we hear a lot of surgery, but, to my mind, a thing of infinitely more importance is the *medical side of war*. It is a well-known fact that in all wars previous to this one, disease was a greater factor in depleting the strength and effectiveness of armies than were the bullets of the enemy. That applied even as late as our own Spanish-American War and the Russian-Japanese War of the present century, in both of which the deaths from disease exceeds in no small proportion the deaths from battle and from wounds received in battle. So, this war, among its other distinctions, has that of being the first in which battle deaths (including those from wounds) were in larger number than disease deaths, thus proving several things,—*first*, that, while war may serve well as a plaything for European monarchs, it can not be indulged in with impunity by the common herd, and, *second*, and most important, the fact that, with hardships and exposures much greater and living conditions much poorer than those of civil life, modern paternal medicine was able to maintain a higher rate of effectives in warfare than we are able to maintain in civil life.

### PROPHYLAXIS

The army, fortunately, recognizes the importance of prophylactic or preventive medicine, and, before even we of the first contingents left the shores of the United States, every soldier, be he officer or enlisted man, was immunized against typhoid and para-typhoid fevers and small-pox.

To my mind, this procedure of itself may be thanked for many thousands of American lives, for, to the ordinary risk of gastro-intestinal diseases incident to campaign in the field, was added the hazard in the fact that even the S. O. S. and troops behind the lines were living among a civilian people whose ideas of sanitation and of hygiene were comparatively primitive and with whom typhoid fever was an almost constant factor.

### SEA-SICKNESS, INFLUENZA AND RESPIRATORY DISEASES

In the stupendous task of transporting an effective army overseas without disaster either in loss of men or bottoms or in point of time, ideal conditions for the comfort and health of the men concerned were, of course, impossible. There was crowding with its consequent insufficiency of air space per man and its tendency to make impossible the preparation and distribution of proper food. This necessary crowding was responsible, too, for a high rate of sea-sickness, for a man who is wavering on the edge of involuntarily emptying his stomach doesn't hesitate long after the man next to him or directly over him spreads his latest meal over the vicinity.

I have no statistics of sickness and death in the transport service but I do not believe that either was high. During the worst of the "Flu" epidemic some vessels lost quite a few men at sea—one with more than ten thousand men on board lost over a hundred on one trip. Such a rate is high, of course, but that was a rare exception and could hardly be considered unusual in the face of the crowding of the troops and of the impossibility of the isolation of any great number of active cases.

The death rate at the base ports, where until last winter living conditions were extremely bad, was much higher. The climate of all of France, except the extreme south, is ideal for the propagation of respiratory diseases, and this applies an hundred fold to the west coast where are situated the four base ports of the United States—le Havre, Brest, St. Nazaire and Bordeaux. In Brest, where something like eighty per cent. of our troops were landed, since its harbor was the

\*Read before the Pickaway County Medical Society, September 19, 1919.



only one of the four that would accommodate vessels of great draft, it is a matter of record that rain fell more than three hundred days last year. In the early days of our participation in the war, these ports were able to shelter and to care fairly well for the men who came through them, but later, when men were being rushed with all possible speed, it was necessary for the incoming troops to sleep in their own pup-tents and to subsist from rolling kitchens. After the comparative luxury of an American cantonment, this life in the mud and slush of France necessarily caused an increase in the sick rate of the organizations concerned. *Troops at the front habitually fared much worse than those in the poorest part of the country and did it with a lower sick rate, but their transition had been, as a rule, more gradual and had left them better able physically to bear the exposure.*

#### THE RAINBOW DIVISION'S LOCATION DURING TRAINING

In the case of our own division, as with all of the early arrivals, after a few days at the base port, active training for trench warfare was taken up under the French in an area fifty to one hundred kilometers from the front. Here we were formally introduced to rural France with all its dirt and squalor, its wooden-shoed and wooden-faced peasants, its manure piles and its old stone houses shared by the family with the family's live stock (including vermin). To our regiment were allotted seven villages in the Vaucouleur area, varying in population from seventy to three hundred and fifty inhabitants, covering about thirty-five square kilometers, and having nothing to choose from among the whole seven. In the distribution of our medical personnel, which at the time consisted of seven medical officers, three dental officers and forty-eight enlisted men, a medical officer and from four to ten men were assigned to each village and one dental officer to each battalion headquarters.

Officers, as a rule, and some of the men, had fairly comfortable billets with the peasant families in rooms that, even if they were cold and smelled slightly of the adjoining stable, were apparently clean. The rest of the men slept in the haymows of the barns, some on cots, others on the floors or on the hay.

#### LACK OF SUPPLIES

We arrived here in the midst of the rainy season, which runs from the last of August to the last of March, without spare shoes or clothing for the men, since the bulk of the division's baggage was on a transport that had turned back for repairs, without medicine except the little that each medical officer was carrying in his own personal baggage, and without transportation of any kind, either motor or animal-drawn, not even saddle horses. Obviously, our troubles, as medical officers, began early.

In each village there was established an in-

firmary for the care of communicable diseases. There were, of course, no cots or blankets except those belonging to the individual soldier and, as I said before, little or no medicine. But we "got by", as the doughboy says, until the arrival of a Ford ambulance and a supply of drugs some four weeks later with only one death from sickness in the regiment of thirty-six hundred men.

It required constant personal work in the early days to convince the men of the necessity, if they were to remain healthy, of keeping their surroundings in a sanitary condition. Pits, covered twice a day with fresh earth, or incinerators were constructed to care for kitchen waste. Pit latrines, also covered twice a day, were dug. The muddy, filthy streets were cleaned and manure piles were moved when the permission of the owner or of the mayor could be obtained. Lister Bags were swung, filled and treated with chloride of lime.

#### THE WATER SUPPLY

In almost every village in which we were quartered in France, (I have a list of ninety-six towns and villages in France and Germany in which I spent at least one night), there was a community water supply; sometimes one fountain and sometimes a dozen supplied the place with water for domestic purposes. To a French peasant, water for domestic purposes meant that which was used to quench the thirst of his animals and to wash his own clothing; he drank it not at all and washed himself with it not too frequently. The sources of these water supplies were usually found on the higher ground near the villages, and, with the intensive fertilization with animal and human manure that had been carried on for years, their pollution was a constant factor. The men did not like the taste of water that had been treated with chloride of lime, for which no one blamed them particularly, and would fill their canteens at night at the fountains, but, after a few experiences with the enterocolitis that followed the taking of raw water, the knowing ones used either treated or boiled water or else followed the example of the French and satisfied their thirst with "Vin Rouge."

During the first winter, we had to deal with innumerable colds, coughs, bronchial affections and some pneumonias, as well as many cases of measles, mumps and tonsillitis. Rheumatism, in my own experience, at least, was present in a surprisingly small percentage of cases.

#### RESULTS OF WINTER HIKING

In the eight days before and during the Holiday Week of 1917, our division hiked a distance of over a hundred kilometers with full equipment (except transportation) and under most adverse weather conditions. Medical Detachments found their work only half done at the end of each day's march, for, from that time until well into the night, they were engaged in caring for the foot

troubles incident to marching in heavy snow. The men were insufficiently shod and clothed, but, aside from the many blistered and frozen feet, a high health rate was maintained and the losses from all causes were less than 0.02 per cent.

#### FUTILITY OF PRELIMINARY INSTRUCTION

As rapidly as they could be spared from duty with their organizations, Medical Officers were sent through a five weeks' course of instruction in newly established service schools. At that time these schools were able to teach little but theory, since no American units had yet been engaged in trench warfare. An excellent three days' course in Gas Defense under British instructors was almost the only thing of practical value that was obtained. Our tables of organization and equipment were radically different from those of both the British and the French whom we were to relieve and it was still problematical as to how we were going to fit in. For instance there was nothing in the organization of either of them to correspond to our old established Field Hospital—a most useful adjunct in campaign in the field in open warfare but as yet untried in trench warfare. But the order called for five weeks of instruction, so that was what we were given, even if it did cost midnight oil or rather candles to enable the instructors to read ahead in the Manual Medical Department. Later, when experience had proven the utter inadequacy and unfitness of our old equipment, these schools were able to accomplish some good in instructing newcomers. But, after all, work under fire could not be taught and the actual experience was necessary to properly complete one's education.

#### THE M. A. DEGREE IN WAR MEDICINE

This Master's Degree was started, in our case, on February 21, 1918, when the 42nd Division was sandwiched in with elements of the 7th French Corps on the Luneville Sector. This place had been notoriously quiet until we *took over*, when the combination of American over-anxiety and German inquisitiveness as to who the new opponents were resulted in a number of casualties. An epidemic of mumps also made its appearance and gave us considerable worry since it was necessary to hold the sick men with us under fire because of the fact that our hospitals were not established and that the French who served us were overcrowded and would not take them. After thirty days here we were given a week's rest behind the lines, following which we took over for permanent American occupation, the Baccarat Sector, as the first division in the American Army to take over an entire divisional area under its own commander.

#### FRENCH SANITATION

I may have hinted before that in my opinion the Frenchman is not the cleanest of human beings and that he carries on sanitation along the

lines of least resistance. His trenches that we took over bore out this contention—I almost said, nicely. In our first sector we were too busy watching air battles and listening for shells in our idle moments to make any great strides toward bettering conditions, but when a permanent sector was taken over by the division one of the first things done was to improve its sanitary condition. Instead of allowing promiscuous defecation in and about the trench, either pit latrines or those of the bucket type were constructed just off the boyeaux or communicating trenches, duck boards were raised and proper and adequate drainage ditches established beneath them, dugouts were pumped out and their entrances fitted with gas-proof curtains.

#### THE MILITARY DISPOSITION AND THE MEDICAL PROBLEM

The front line was, in military parlance, "held in depth", which gave a normal regiment of infantry the following disposition: One battalion of four companies held the forward position, another of the same strength held the intermediary or support position (also called the Line of Resistance), usually from one to three kilometers behind the front line, and the third battalion, also of four companies, held the reserve position, about the same distance back of the support. Of the three auxiliary companies of the regiment, the distribution was more complex. Headquarters Company with its Pioneer Section, its Stokes' Mortar Section, its Signal Section, its 37mm. Section, etc., was scattered over the whole regimental area, and the same applied to the Machine Gun Company. The Supply Company had its headquarters in the rear between the railhead and the reserve position but had men detailed to each company of the regiment so that it, too, was well scattered.

It can readily be seen that the problem of the Medical Department in properly covering this area, all of which was periodically under shell fire, was no small one. Our personnel was always short because of losses through battle casualties or sickness and only once after we first went into action and then but for a few days did we have our full complement of seven officers and forty-eight men. It might be interesting to note, in passing, that from October 17, 1917, when the regiment was divided for transportation overseas, until April 26, 1919, when it was landed at Camp Merritt, N. J.,—a lapse of time of a little more than eighteen months—the Medical Detachment of the 166th Infantry was never together, and of those who went over with the regiment, but seven returned who had had continuous service with it in action, one officer,—the writer—and six men.

Battalion reliefs were made about every eight or ten days, at which time the front line battalion would move back to the reserve position and the other two would move up one stage. Bat-



talion surgeons and their detachments stayed always with their respective battalions.

The old equipment of one pack-mule outfit for each regimental detachment was obviously inadequate to handle the mass of supplies that we were expected to transport, so, by easy stages, we acquired an escort wagon for headquarters and a two-wheeled cart for each battalion detachment, together with twelve saddle horses and a motorcycle with side car. This last was exchanged a few days after the Armistice was signed for a Ford Light Delivery Truck.

#### RAIDS AND "FLU" AT BACCARAT

During the Spring of 1918, with good roads for transporting wounded and excellent hospital facilities in and near the city of Baccarat which was less than ten kilometers back of the line, our sick and wounded were well cared for. In a rather extensive raid on the enemy's position in the Bois de Chien on May 3, 1918, in which I participated, we established the record of clearing the field and of having the last of the wounded reach the hospital in Baccarat in less than three hours after the action began. Here we had, in May and June, our first experience with the "Flu", which was known officially at that time as the "three day fever." *The men were fortunately in good physical condition and, although fully ninety per cent. of them were affected, there were almost no deaths and but few of the sick were serious enough to be evacuated.*

#### PREVENTING TETANUS

Although the sector was only lively at intervals, there were enough casualties to permit of our seeing and caring for almost every conceivable kind of wound by the time we were relieved the latter part of June. Owing to the contamination of the soil of France from centuries of animal fertilization, tetanus took a heavy toll in the early days of the war, and, for that reason, the routine administration of anti-tetanic serum followed the receipt of every wound or even barbed wire scratch. I have no record of the number of these injections given within the regiment but I know that they went into the thousands, and were all accomplished without a single case of anaphylaxis or of sepsis, so far as I know.

#### FRENCH FEVER

The festive "cootie" abounded here and we were never after wholly free of his attention until several days before we embarked for home. He is blamed for the so-called Trench Fever, of which we had many cases, as well as Trench Nephritis. In addition, scratch marks, particularly on the lower extremities, easily became infected and were extremely hard to heal. A great many cases of scabies were also present. A few portable shower-bath fixtures and the establishment of a hospital along the Meurthe River near Baccarat (called Scratchville-by-the-Sea) relieved a great many of these cases but

did not clean them up entirely. The Trench Foot, acquired from too long exposure to moisture, was also with us here.

#### EVACUATING WOUNDED IN CHAMPAGNE

In the next sector, Champagne, where the 42nd Division stood the brunt of the greatest and last of the German drives, a quite different problem awaited the Medical Department. For the several weeks that we were in the sector preceding the drive, conditions were about the same as in the other fronts on which we had served, but, from midnight July 14th, when the most terrific bombardment in the history of the whole war or of the world, for that matter, broke, work in the open was almost an impossibility. Roads were destroyed, barracks and light shelters were demolished and until several hours after daylight exacuation from most points was at a standstill, so that wounded could only receive the first-aid attention that we in the forward positions were able to give. After the main force of the drive was broken ten hours after it started, evacuation proceeded more smoothly but was still not ideal since field hospitals had been shelled out of their positions forward of the city of Chalons and had all been forced to move a distance of twenty kilometers and more from the front line. Even here they were bombed several times each day and night by the Boche planes that had complete air supremacy in this sector, as in all others in which we were ever engaged.

#### IN THE CHATEAU THIERRY SECTOR

On being relieved, the division was transported by train and camion to the Chateau Thierry Sector and took over a portion of the line held by the 26th American and the 164th and 167th French Divisions and attacked on the night of July 26-27. During the succeeding eight days the action was extremely severe, but, against most determined resistance, an advance of fifteen kilometers was made, entailing a loss from all causes for the division of almost eight thousand men. Of the four infantry regiments of the division, the 166th had the lightest casualty list, yet ours totaled about eleven hundred or, roughly, one man in every three.

*It is impossible to describe or to even attempt to convey to you anything like a clear idea of the difficulties of such a situation. Because of the overwhelming number of wounded and the failure of Evacuation and Mobile Hospitals and Evacuation Ambulance Companies to move forward, our own divisional ambulance companies proved entirely inadequate to handle the situation, since they were forced to carry to the rear as far in some cases, as one hundred kilometers. So that, in spite of the fact that we used wagons of all sorts, trucks and independent S. S. U. Ambulances in evacuating, there was always a considerable congestion of wounded in the forward aid stations. To the strain and stress of working in high speed under a most destructive and, to*

say the least, disconcerting fire, was added the worry and responsibility of clearing the stations of men already wounded. To keep pace with the advancing troops, it was necessary, when the battalion surgeon and his detachment went forward to establish a new station, to leave behind in the old station two Medical Detachment men whose duty it was to clear it of wounded and then re-join their command.

#### ENTERO-COLITIS

When, after what seemed years, our relief came, we were withdrawn from the line and bivouaced in a forest that had been taken in the first day's fighting, where we remained in mud and filth for ten days, burying the dead and cleaning up the area.

This entire retaken territory was dirty in the extreme, infested by swarms of flies and heavy with the odor of decaying flesh, both human and animal. All water was polluted, although there were no instances reported of mineral poisoning. A part of one organization had the unique and not wholly pleasant experience of using water from a well for three days before discovering that a dead German was occupying it. Extreme care was exerted toward keeping the Lister Bags, of which there had been issued three to each company, filled with the best water obtainable, properly sterilized, but the men had used for drinking purposes water from shell-holes, pools and polluted ditches and this, together with the myriads of flies, was responsible for a very high percentage of cases of violent entero-colitis. All proper remedies at hand were used in the effort to relieve this condition since it cut in quickly on the effective strength of the command, but in our experience, the best results were obtained by one dose of three and a half or four grains of calomel, powdered, and taken on the tongue, followed in six or eight hours by large and continued doses of bismuth subnitrate.

#### REDUCING THE ST. MIHIEL SALIENT

After five days' rest in towns along the beautiful Marne River and eight days in the Bourmont training area, where men and equipment to replace the losses in action were received, the march toward the St. Mihiel Salient was started. This journey was conducted with great secrecy—secrecy only from those who were participating in it—all marching being done after dark and the men sleeping and keeping under cover by day. The French civilians knew a week in advance that we were to march on a certain night but we knew it officially only a few hours before the moving hour; the French and Americans in the back areas, even as far as the Mediterranean, knew that the American First Army was to attempt to reduce the St. Mihiel Salient, but we reducers knew it by order less than twelve hours before we went over the top. The only surprise that Fritz had on this occasion was in the exact day, for several weeks of rain preceding Sep-

tember 12th had turned the terrain into a sea of mud that made almost impossible the transportation of heavy vehicles over anything but the National Highways, and the night of September 11-12 was by big odds the most miserably nasty bit of weather I have ever been out in. So, while our square-headed friends knew better than we that the attack was coming, they did not expect it in such weather.

Our division had the center of the American position and although the units on both sides of us suffered quite heavy losses, our own were very slight. Our great difficulty was in the transportation to the rear of the few who were wounded, for the old roads across No Man's Land that had been unused for over four years, except as targets for high explosives, were, in their muddy and torn condition, almost impassable for wheeled transportation and during the first twenty-four hours we had almost no ambulance service. But the seemingly endless streams of German prisoners were pressed into service as bearers and by putting four men to a litter we were able to get our wounded back to points where they could be reached by ambulances.

After an advance of nineteen kilometers in two days, the position was organized and we settled down to the routine of trench warfare, with the added difficulty of having to construct our own front line shelters.

#### VILE CONDITIONS IN THE GERMAN AREA

Here again vile living conditions were encountered in filthy, polluted, fly-infested, captured territory. In spite of their boasted knowledge of sanitation and hygiene and their pioneer education along these lines, the German reserve and rest areas were invariably glaring examples of how an army should not live. Electric lighted, well constructed billets were the rule, with plenty of ventilation, sleeping space and good bunks; water was always available and every town and camp had sufficient bathing facilities, both showers and tubs, and in several places good sterilizers for clothing and blankets were found, but, in spite of all this, all buildings were louse-infested; well constructed, fly-tight latrines of the bucket type were open and the tubs overflowing over the adjacent ground; piles of garbage and kitchen waste of long standing were everywhere; deposits of human excreta were discovered so thickly over the ground around all villages and camps that it appeared to be almost an attempt at fertilization; billets were invariably littered up with everything from old bones to feces. Again, a severe diarrhea detracted considerably from our effective strength, in spite of the constant and careful supervision of the drinking and cooking water, and can be blamed, I believe, to the pollution of food by the myriads of flies.

#### IN THE ARGONNE SECTOR

After twenty-one days, we were relieved and, without rest, proceeded by camion to the Ar-



gonne, where we remained until the end of the war. *We thought we had sounded the depths in bad living conditions but it remained for this last sector to show us how utterly dirty, tired and sick in mind and body a human being can be and yet live. Weather conditions with almost constant cold rain added to the natural discomforts of diarrhea, lice, influenza and extreme mental and physical fatigue. No shelter, poor food and insufficient clothing contributed their mite to the whole.*

*Respiratory diseases were common here and it soon became apparent that every case, however slight, must be treated as serious, for, because of their lowered resistance, men became grave risks when affected by what we are wont to call minor ailments. The same was true in surgery—men would go into serious shock from superficial wounds and often fail to respond to the usual treatment of heat and stimulation, and die.*

#### THE MARCH TO THE RHINELAND

After the signing of the Armistice, the march to the Rhine was undertaken after a few days of rest and many men who had gone through all of the action with the division had to be evacuated to the rear during this march because of exhaustion, foot troubles or illness. Again, there was a lack of sufficient clothing and I believe that in our regiment alone fully four hundred men completed that march with some part of their bare feet on the ground.

Instead of a much-needed rest on arriving in the Rhineland, a heavy schedule of drill that occupied practically all of the daylight hours was ordered from Army Headquarters, and the attendant fatigue and exposure of the worn-out men resulted in a high rate of serious respiratory diseases. Protest from the Medical Department finally had the desired effect and the schedule was cut down to permit of a reasonable amount of rest.

Billets here were excellent and practically every enlisted man had a bed. Bath-houses along the Rhine and at Neuenhar, a famous watering place in our area, together with a Foden-Thresher Sterilizer and many improvised sterilizers soon brought down the percentage of louse infestation. Clothing, food, mail, commissary and Y. supplies came in time, and, on the whole, the service here was most pleasant.

#### SOCIAL DISEASES

In France we were able to hold down our venereal rate to almost nothing by constant missionary work among the men on the value of prophylaxis and by the establishment with every unit of stations for its administration. In addition, every city that was in the American area or was visited by American troops had a number of public, well-marked prophylaxis stations conducted by Medical Department men. I do not believe that Germany had a greater percentage of venereal cases among her "wild

women" than did France, but the fact remains that soon after reaching that country, the venereal rate of the Army of Occupation shot up beyond that of the rest of the A. E. F. and our divisional rate, because we were closer to the cities of Cologne and Bonn, became the highest in the Army of Occupation, so that we had the doubtful honor last winter of leading the American Army in so-called social diseases. *This all came about because of the insistence of G. H. Q. that fraternization with a German was a most heinous offense, for the punishment of which the terrors of Hell would hardly be adequate. We, who knew the doughboy, anticipated trouble, and trouble came, and not until the damage was done did an order come from G. H. Q. to the effect that sexual intercourse would not be considered as fraternization and that no action would be taken against men who reported for prophylaxis after intercourse with German women.*

#### IMPRESSIONS

*I have several deep impressions of this service. One is, of how much good can sometimes be accomplished with a very small armamentarium. We were usually short of a lot of things that we would have had in civil practice, yet the end result was the same, maybe better. Another was the recuperative powers of the body when the recipient of the injury or disease was in good physical condition, and the opposite state, when, after months of extreme and continued expenditure of energy, men died of the most trivial wounds and illnesses. Still another was the remarkable amount of exposure, fatigue and strain that the average human being could stand without breaking. Many did break and I think that beyond any doubt they presented the most pathetic pictures of the whole service. The worst of the wounds that I saw did not impress me as did the spectacle of big, strong, American boys reduced to chattering, gibbering idiots by too long exposure to the threat of death or mutilation that each shrieking shell carried as it whined through the air.*

From the lessons of the war, the exploiters of state or paternal medicine can have their innings and can back up their arguments with a formidable array of statistics, while, surely, with these records on the table, the last lingering doubt as to the efficacy of sane, preventive medicine will disappear.

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*Luminal, Sodium, Phenobarbital, Sodium, Sodium, Phenyl, Ethyl, Barbiturate*—The monosodium salt of phenyl ethyl, barbituric acid. The actions and uses of luminal-sodium are the same as those of luminal. For hypodermic injection luminal-sodium is used in the form of a 20 per cent. solution. The dose of luminal-sodium is 10 per cent. greater than that of luminal. Winthrop Chemical Co., Inc., New York.

## The New Hope in Heredity \*

Martin H. Fischer, M. D., Cincinnati

**Editor's Note.**—If there is one consolation in heredity it is, as Dr. Fischer writes, that: "The winners of a new generation are the progeny of hard-working parents, the losers the sons and daughters of the retired best families." The old saying has it that "heredity is something which a father should never forget and a son never remember." "In plainer terms, a parent should take stock of the articles of his Mendelian inheritance, and, when good, see to it that they go on in undiminished or increased vigor to his children. If of the fortunately endowed of this earth, and married to such another, he could, as a pure Mendelian, merely lie back and feel secure that quality will reappear in his children. But if he is a Lamarckian, he knows that eternal vigilance is required in addition. A too happy satisfaction in having been born biologically rich, breeds complacency; of complacency, self-satisfaction; and of self-satisfaction, ruin. Conversely, a decision that he is nothing, the determination that he will strive and strive mightily and then beget his children, may mean in the new generation, the start of the super-man." No doubt your interest is already caught. Then read on and discover your possibilities in the betterment of the race. Shall your sons or daughters be liabilities or assets to the world they live in? Much depends on you and—their mother.

IT has been written that man liveth not by bread alone; the other thing is hope. For this reason, in spite of Weismann, a large portion of the human race has persistently protested, even though somewhat silently, against the dogmas of pure Mendelian inheritance, and yielded to the hope that there might be something in the inheritance of acquired characteristics. Almost involuntarily the human heart resents the Mendelian sternness which holds that only from quality can come quality and from pure worthlessness, only worthlessness. Against such veritable predestination and damnation of infants, the average man inclines to the gentler judgment and the wish that whatever his own weaknesses, they be not visited upon his children, and that, in proportion to their deserts they be free to attain merit on their own.

### THE PROBLEM OF INHERITED ACQUIRED CHARACTERISTICS

The problem of whether there is or is not an inheritance of acquired characteristics is, of course, an old one. Without the acquirement of new characters, and without their inheritance, how came we here from presimian stock, how got we gentle cows from the cattle of the wilds, how came any present strain of living thing from a simpler progenitor?

Differently framed, this matter of the acquirement and the inheritance of new characters is the question of the value of disciplinary education; of the basis for faith in the sureness of reward, even to their children, for those who meet squarely and overcome the difficulties of the day; of the sacredness of continuing the eternal struggle against the things that beset life from without and within.

Before, however, we may presume upon what seems the correct answer in such ultimate issues, we must agree in Socratic fashion upon what we mean by a character, what we mean by the

development or acquirement of a new character, and what we will accept as evidence of its transmission.

The obvious marks which give distinction or character to an object are those which have to do with its color, with its form or with its weight, and if we peruse the orthodox volumes on biology, it is at once apparent that full, and almost exclusive, use has been made of this easy basis of classification. For what is simpler, in order to distinguish a white hen from a red one, than the color; a lizard from a snake, than the possession of legs; a barnyard rooster from a Chinese pheasant, than size?

This classification on the basis of morphology, while scientifically popular, begins to show signs of weakness when we carry it into the realm of the higher animals. Something less obvious than size or weight or color seems to distinguish a horse from a jackass, and an idiot from a wise man. Though a more elaborate fringe may serve to differentiate one unicellular organism from another, and though a blue foot may, to everybody's satisfaction, win for an insect a compartment on the museum shelves separate from another with a pink one, things get more complicated as we carry our standards upwards. Here such criteria fail. Hens that look astonishingly alike fail to lay with equal ardor; black mulley cows turn out unequally faithful in milk production; dogs, though they appear the same, hunt unequally; men, though they look alike, may be the chiefs or the inmates of an institution. Obviously, however interesting may be form, it is no index to functional capacity, and it is in the latter that we are really interested.

### CORRELATION OF FORM WITH FUNCTION

Of course many attempts have been made and are still made to correlate form with function, but they have led less to light than to misunderstanding and to bitterness. We have tried to reason, for example, from big heads to big brains and to big intellects; but big heads are often full of water, or come on the dullest of people;

\*Presented in abstract (from the article published in the *Unpopular Review*, Vol II, P. 320, 1919,) before the Section on Mental and Nervous Diseases at the state meeting, Columbus, O., May 7, 1919.



and the skulls of the intellectuals have often yielded an amazingly small dead weight of gray substance.

*For such reasons the better system of the functional classification of characters has come more and more to the front. In this is stressed not the weight or shape of an organ or an organism, but its ability to do work. It becomes, now, not the brown or blue of an eye, but its ability to see; not the weight of brain substance, but its power to think; not the shape of limb, but its power to yield quantity or speed or accuracy of motion.*

With this concept of character in terms of function in mind, what is meant by an *acquired* character? Here again definition is one thing, fact another. Since the issues at stake are not seen clearly even by the professional workers in these fields it may be expedient to relate a story upon myself since it shows the process by which my own thinking was clarified.

As a new editor I had to pass upon the undisposed-of manuscripts which passing years had stranded upon my predecessor's desk. Out of the midst of many divergent opinions one was universal,—his staff and mine agreed not to print a submitted note on the inheritance of acquired characters. I record the details because I began in sympathetic fashion to stand by them. The very title seemed enough to justify their decision: for had not the Lamarckian principle in the past century been philosophized and experimented into the discard? My prejudice lasted into the middle of the first paragraph of the article; at the end it died. "If you will look into your dictionaries"—thus it ran—"you will see that *to acquire* means to obtain by *your own* effort. A mutilation is therefore not an acquirement. When the tails of mice are amputated the acquirement is in the muscles of the amputator, not in the tails of the mice." Here is dealt the Brutus stab at Weismann's heart: for this tailless-mice argument (together with some high priori assumptions regarding germ cells) is the foundation of his and his followers' biological philosophy. There followed some mental housecleaning on my part, and an article by Casper L. Redfield went to the printer.

With the clarification which this critical logic brings, much of what has seemed scientific and, superficially viewed, sound, goes overboard. It is necessary, therefore, to get clearly in mind just what is meant. The important point is in the shift given our point of view. Since the writings of Lamarck and of Darwin we have, of course, accepted as true that *something* changed and can change the characters of plants and animals; and particularly since the labors of the latter have we held that the environment is in some fashion responsible. But we have considered the environment too exclusively—the response by the organism too little. It is our own

fault that we have done this; for a closer study of Lamarck would have taught us otherwise.

#### INFLUENCE OF ENVIRONMENT AND FUNCTIONAL EFFORT

*Our quotation still holds the environment important in the biological drama—how very important we shall see later—but it no longer remains the purely external thing which, willy-nilly, compels change in the individual, but one which makes the individual a partner in the affair, and this in proportion to his reaction to that environment. It makes primarily determinative not the load which weighs him down but the functional effort which he makes to carry it.* This revised point of view makes valueless, so far as any importance for the problem of the inheritance of acquired characters is concerned, all the numberless experiments in which plants or animals have been mutilated, (by nature, by war or by laboratory experiment) poisoned or grown under abnormal circumstances in order to see if the offspring would not reproduce the physical stigmata which had been inflicted upon the parents. Regularly such stigmata have not been reproduced. But these experiments of man or nature do not prove, as is so often claimed, that acquired characteristics are not inherited. They only prove that mutilations enforced by accident or design are not inherited. The error is not in the response of nature but in the foolish reasoning of man which labels as *acquired* a character which has only been *inflicted* upon an unresponsive recipient.

Is there at hand any evidence of the existence of any *new* character, as thus defined in terms of function, in either animal or plant strains which was not present in earlier generations and if so, how was it *acquired*? Or, given such a truly acquired character, can it be transmitted to another generation?

#### THE REAL VIEWS OF LAMARCK

Lamarck, almost a century ago, held that this could be done, that it was in fact the method by which animals with new characters are produced. He stated clearly that both the development and the loss of functional character was dependent upon the amount of use or disuse to which it was put, and that such functional capacity and incapacity then expressed itself in the organs or organisms of the progeny. But a misunderstanding of what Lamarck really said, and the substitution for it of what others have thought he ought to have said, together with the making of experiments which, while good in themselves, were worthless in their bearing upon Lamarck's teachings, these things have buried the original Lamarckian thought in a mass of rubbish. Since we are destined to go back to his teachings *just as they were written* it is well to insert here his own words, for a man should be judged by what he himself has said and not, as seems so universally the custom, by what someone has said

he said. I quote the first and second laws of his theory of descent,<sup>1</sup> appending two paragraphs which might have been read as warnings, but now stand to mock the errors and false logic of the century gone since he penned them.

*First Law:* In every animal which has not exceeded the term of its development, the more frequent and sustained use of any organ gradually strengthens this organ, develops and enlarges it, and gives it a strength proportioned to the length of time of such use; while the constant lack of use of such an organ imperceptibly weakens it, causes it to become reduced, progressively diminishes its faculties, and ends in its disappearance.

*Second Law:* Everything which nature has caused individuals to acquire or lose by the influence of the circumstances to which their race may be for a long time exposed, and consequently by the influence of the predominant use of such an organ, or by that of the constant lack of use of such part, it preserves by heredity and passes on to the new individuals which descend from it, provided that the changes thus acquired are common to both sexes, or to those which have given origin to these new individuals.

These are the two fundamental truths which can be misunderstood only by those who have never observed or followed nature in its operations, or only by those who allow themselves to fall into the error which I have combated.

Naturalists having observed that the forms of the parts of animals compared with the uses of these parts are always in perfect accord, have thought that the forms and conditions of parts have caused the function; but this is a mistake, for it is easy to demonstrate by observation that it is, on the contrary, the needs and uses of organs which have developed these same parts, which have even given rise to the condition in which we observe them in each animal.

With the statement of these laws we may return to the evidence of our own day which proves the truth of these things, and for the unearthing of which we are indebted to Redfield. We shall begin with his observations upon the domesticated animals and see later how the laws which appear here, reappear in the story of the human race.<sup>2</sup>

#### THE ACQUIRED CHARACTERISTIC OF HIGH SPEED IN RACE HORSES

The high speed of horses at the trot is not something which was born into them in the Eocene; it has been developed since. A century

ago horses could trot, but in the minds of those who follow the ponies today they did it indifferently well. Races were then won by what would now yield only carriage meat. Specifically, the best trotters could just cover a mile in three minutes. The records of some typical performers of the past century are shown in the following table:

1818 Boston Blue .....	3:00
1830 Bull Calf .....	2:47¾
1839 Dutchman .....	2:32
1845 Lady Suffolk .....	2:29½
1859 Flora Temple .....	2:19¾
1874 Goldsmith Maid .....	2:14
1892 Nancy Hanks .....	2:04
1912 Uhlan .....	1:58

To account for such progressive increase in quality, one of two hypotheses is usually accepted. The superior thing may either originate *de novo*, in other words, a special creator or a special creative force must be assumed to be active every time a better thing springs from an inferior; or else we may accept the teaching of De Vries who holds that all newly created characters, as portrayed in variations in species, are mere sports in the sense that the progenitors had latent within them all the possibilities for the new character. But there are serious objections to both these views. It does not explain anything to say that new characters are created *de novo* and De Vries' view, even when admittedly correct, accounts for only a few of the instances observed in nature. If we try to make it fit all cases, then the parent amoeba must have contained within itself all the possibilities of the superior animals; in the organisms of our presimian ancestors must have resided the wise men of our own generation; in the original Eve must have been enchaind the prototypes of Sappho, Catherine of Russia and George Eliot.

If we try to discover why the horses of our century trot better than those of a preceding one, we may begin by saying that the speedier horses came to be such through better training and through the better development which results therefrom. Everybody agrees to this, but such explanation is not sufficient. Other horses which looked the same or better, with similar training, never developed enough quality to get near a track. In fact not only do we find acknowledged race horse stock failing to produce racers but, periodically, non-race horse stock turns out to be the progenitor of winners. Moreover, full brothers or sisters when equally trained show up as *unequal* performers. Finally, there is no provision in Mendelian inheritance which allows one to get more quality from a previous generation than was existent in it, and the table shows that the speed of an Uhlan was not in any of Boston Blue's generation. Race horses, in other words, like royal families, seem to come out of the blue and, into the blue, to vanish. What mean such apparent contradictions?

<sup>1</sup>Lamarck, *His Life and Work*, by Alpheus S. Packard, page 303, New York.

<sup>2</sup>Redfield's first studies on horses appear in the *Horseman*, 1902 to 1906, and the *Horse Review*, 1904 to 1910; his studies on cows, in the *Holstein-Friesian Register*, 1907; a running account of his observations is found in his *Dynamic Evolution*, New York, 1914; see also his *Great Men*, Chicago, 1915, and various polemical discussions appearing in the *Lancet-Clinic*, the *Chicago Medical Recorder*, the *New York Medical Journal* and other periodicals of the years 1914 to date.



A study of the stock records seems to show that race horses produced race horses only when they were raced, and that they ceased to be the fathers and mothers of racers when they retired to the pleasant home life of the breeding stable. On the other hand, stock not considered of high standard and on this account, we might almost say, hard worked in runabout or carriage, furnished the true blue blood and the veritable *dark horses* from which came winners. Since horses used for racing are not ordinarily bred, while breeders are but rarely raced, these *peculiar* facts and apparent age-old contradictions of the breeding establishments become readily intelligible. *The winners of a new generation are the progeny of hard-working parents, the losers the sons and daughters of the retired best families.*

#### ILLUSTRATIVE RECORDS

History shows that two hundred of the sons of Almont were used for breeding purposes. Of these, ten per cent. were raced while ninety per cent. were kept at home because they were considered too valuable for breeding purposes to have their energies sapped upon the track. As the successful sires of racing stock the raced sons, however, outranked the unraced as sixteen to one.

But when in Almont's own life did he produce his winning offspring? By tracing back the time of birth of his sons and daughters this point is found at the age of ten years. And where from a training point of view did he stand at this time? He lived altogether twenty years. Of these the first five were spent in training as a race horse, the next five in steady but moderately hard work, the last ten in a workless harem. Within two years after the assumption of his idle estate, he produced the last son or daughter which, because of quality, has lasted into the horse history of today.

Like Almont, Belmont lived half of his twenty-five years in hard training and exercise, and half in idleness. His best sons were born during his period of activity, which comprised some eleven years; and of these sons, the best two were born at its height, and within two years of each other. The transition from the father of performers to the father of mediocrities was coincident with his change from work to idleness.

The history of six horses studied in this fashion, which were the fathers of several thousands of immediate off-spring and of several tens of thousands of grandchildren, shows that three thousand of the progeny fell in the performer class. Half of these, and practically all of the best ones, came from less than one hundred sons and the same number of daughters of the parent six, while the remaining and less valuable half came from seven hundred sons and an equal number of daughters. When the time of birth of the quality sons and daughters is traced back to the original sires it is found that they

were all born at a time when the sires were in the best state of active development.

Let us see, now, over what road came race horse stock from progenitors who were in themselves decidedly middle class. Abdallah 1, because considered worthless as a breeder, was almost worked to death and then "turned out in the wintry blast on a sandy beach and permitted to starve." Just before his end he sired Hambletonian 10, destined to be the great founder of American trotting stock. Hambletonian had one hundred and fifty sons which became the fathers of standard performers. One of these, known as Alexander's Abdallah, died at the age of twelve with few offspring. "His early life was abuse and drudgery. One of his offspring was Goldsmith Maid, for many years the most famous trotter in the world."

Among the older sons of Hambletonian was George Wilkes, who "was early sent to the track because no one would patronize him as a sire. He remained on the track until he was seventeen years of age and then was sent to Kentucky and bred on shares because no one would pay his stud fees. After he was dead, the blood of George Wilkes was more sought after than that of any other horse."

*The reason why Abdallah was cast out, and why George Wilkes was raced to death, was because they were considered worthless as the probable producers of winning stock. Because thus misjudged they were subjected to a training which might have killed them. Since it did not, it merely developed tremendously their trotting powers and it was this acquirement which passed into, and flowered in the sons.*

As the great rise, so also do they fall. Due to the practice of the stable which made it the custom not to breed racers but to breed "to their blood" in brothers and sisters, and not to race breeders, the descendants from racers are few, those from breeders many. The result is shown in the generations which have followed. The years of work which made for the development and subsequent fame in Abdallah, Hambletonian and Wilkes, made with equal speed for degeneracy and the false pride of mere *family* in their non-working relatives. Since in horseflesh, performance and not sentiment keeps a strain in the winning list and in the family blue book, the thirty years after Hambletonian's death sufficed to thin his blood to the consistency of the mediocrities, and to erase his name from the pedigrees of the new winners. With slight modification, the same story is written of the blood of Wilkes.

#### THE DEVELOPMENT OF MILK PRODUCERS

The enormous quantity of milk produced by the dairy cattle of our generation constitutes another functional character which the cows of bygone generations did not have. When even confessedly ordinary cows in our day produce enough milk not only to nurse their calves but to

drown them, we are obviously face to face with a physiological character which, in comparison with the standard of production a few decades ago, is new. By what process of training and by what process of selection and breeding has it come about that even the youngest mothers of our present dairy herds produce more milk than the oldest of past generations?

It is characteristic of cows to produce a certain quantity of milk per day when their first calves are born. With proper care and regular milking the amount produced is decidedly larger when the second calf is born, still larger with the third, and so on up as far as present records go. The matter is officially recognized by breeders who, for the judging of cattle, follow a standard, which in the case of the Holstein-Friesian Association requires that the amount of milk produced in the first ten days following birth of a calf shall not fall below the following amounts:

For two-year-olds.....	354 lbs.
For three-year-olds.....	432 lbs.
For four-year-olds.....	511 lbs.
For five-year-olds and over.....	589 lbs.

While the official standard does not go higher, it is known that the actual increase in milk-producing power continues beyond six years.

It has already been seen that the best trotters came from horses active in the business of trotting, and that indifferent performers were born of known trotters who had abdicated. If we substitute power to produce milk for the term ability to trot, the statistics of dairy husbandry may be used to discover not only the process by which the great milkers of our day came from the poorer ones of a previous generation, but how from one and the same stock, milk producers of very different quality have been and are now derived.

*Since increased milk production with successive calves is dependent upon the increased exercise to which the udders are subjected through milking, it was to be expected, other things being equal, and with the inheritance of acquired characteristics possible, that those calves and their descendants should prove best in milk production in a new generation which had been born latest in the calf list of any mother.*

Investigation has shown that the probability that a calf will become a great milk producer rises steadily as its number in the calf series of a given cow rises. While there is a chance of being born a producer in this regard as a first calf, it is measured, roughly, by the ratio of two misses to one success. Even chances surround one as a third calf. One stands two chances of being a success to one of being a failure if a fifth or sixth calf, and three chances to one if a seventh to ninth calf. When the daughter of a still older and hard worked mother, the probability of glory as a wet nurse to the human race stands as four to one. Differently expressed this means that but one out of three calves, if a first

calf, is likely to appear as a great producer; but four out of five if they are the fortunate (or unfortunate) children of old age. *As written in the unsentimental history of the breeders, this law finds expression in a ruthless weeding-out process. Without knowing the reason for it, this history shows that the breeders have preserved only the youngest daughters of the oldest cows, they having sent the first born the commoner way of all flesh.*

#### THE FACTORS OF LAVERACK'S SUCCESS IN BREEDING SETTERS

Dogs these days are judged for the most part by the *points* which they reveal in a bench show. Scientifically expressed it means that morphological standards govern judgment; expressed in human terms it means that we love the seven-foot princes of Howard Chandler Christy. But a more cruel world thinks that lounge lizards ought not only to look, but to do; or, to stick to the dogs, that setters should be able to run, to jump and to hunt. Somewhat vaguely, those who attend the devourers of dog biscuit at a show are also of this opinion; for, when possible, they emphasize not only points in looks, but the fact that here is blood from Laverack's setters.

Laverack's animals came from what were not considered extraordinary dogs, Ponto and Moll. Between 1825, when he bought them, and 1865 which ended his career, he succeeded in producing "the best setters in the world." During this period he "never bought dogs, never sold dogs, never had many dogs, and the final generation had no blood other than that coming from the original Ponto and Moll." Then how got he from average stock the supreme quality of his time?

To judge him by the facts of his history, Laverack was obviously not a panderer to the dog mart. Obviously, also, he was not a professional breeder. The facts are that he was a hunter, and that he bred his dogs only often enough to keep his pack filled. His ways were not the ways of the breeders of his day; in fact they differed from theirs so markedly that when Laverack said what he had done he was called a liar. What then were his methods? *Primarily again, he put his dogs to work. He used them in his hunting operations and used them hard. Late in their careers he would breed them, and only in sufficient numbers to keep full his hunting kennels. He used for hunting purposes both his male and females, and after strenuous service in the fields would breed brother to sister. We are not at this time concerned with the problem of the allegedly ill effects of close inbreeding; but in Laverack's series, they were obviously absent. The important fact is that he built the reputation of his house upon a demonstrated quality in both father and mother.*

Laverack's dogs in 1870 went to Llewellyn, another breeder, who crossed them with dogs of his own. But Llewellyn, too, trained and raced his



dogs, but only the males. For this reason the crosses between his own males and Laverack's raced females yielded winning stock while the opposite procedure, in which he crossed Laverack's males with his own unraced females, produced only mediocre performers. From these crosses has come the foundation stock of our own country. If we ask regarding the dogs of our generation it is found that they are of two types. The *performing* dogs have come exclusively through older parents and only from such as were trained and run in field trials; others, which in purity of mere family had everything in them which made famous the performing dogs have also attained distinction, but it is the distinction of bench shows and not of the field. Because good looking they are the cup winners when points mean looks; and because cup winners they go to the breeding establishment. Those less by the standards of Apollo go to work; but of such come they who follow the scent, run the fields and are not gun shy.

#### THE BREEDING OF MEN

The biological history of the human race is not much different from that of other pet stocks, excepting, of course, that it is not as carefully kept. We know something of the life histories of the politically royal families; a little more comes out when the royal rich select their family crests; quality performers, however, like the babies of our childhood, seem to come "out of the nowhere into the here." But do they? Heaven knows that however negligent we have been of the lower levels of the human stock, we have tried to keep certain classes definitely raised above them. Have we not kept noble blood wedded only to noble blood, and have we not crossed gold only with guilders? The problem would have been eternally solved, and quiet would always have prevailed, had not commoners periodically snubbed peers, monks insulted churches, and slaves the whole world. When the upstarts do it successfully, we adopt them into the human stock registers, hunt up (in vain perhaps) their lines of descent, see them, now rulers and rich, tarry a while upon their new pages, and go out again.

Shall we add at once: how like unto the horses and cows and English setters?

The thing which ultimately and for human purposes, distinguishes man from his simian brothers, or one man from another, is quality of mind. As ruthlessly as professional breeders kill off their inferior strains, thus ruthlessly does the history of man kill its inferior strains, permitting to survive, as its acknowledged great, only those who did better than merely "share in the errors of their time." If we look at that which has thus escaped slaughter, what does a study of their lives and pedigrees show?

We may begin again by pointing to the fact that mental development in man, which at the time of birth is still of a low order, does not

cease with the attainment of the allegedly adult physical state, if in fact it may be said to have stopped even forty or more years later. Reasoning by analogy, it is therefore to be expected that, other things being equal, a father or mother of mature years is more definitely possessed of acquired mental character than a younger one; and, if it is allowed that there is an education which is not bounded by the walls of our famous red schoolhouse, even our so-called very old men and women may not yet have all entered into the state of their second childhood.

Not to start in the slums, but with the blood of our best New England families, the genealogical tree shows a normal or average breeding rate of a little better than three generations to the century. More specifically, the average age of fathers and mothers at the time of birth of their children, is short of thirty-three years. New England blood is acknowledgedly good stuff, yet how does this already slow breeding rate compare with that of the great men of history? How does the New England rate of sixty-six years from birth of a grandfather to birth of grandson compare with the rate when the grandson is recognized as eminent? History speaks in no uncertain values. Instead of the sixty-six years or less, the following numbers are found:

Augustus Cæsar.....	118 years.
Audubon .....	115 "
Lamarck .....	110 "
Franklin .....	108 "
Washington Irving.....	107 "
Wallaston .....	107 "
Sulla .....	105 "
Montmorency .....	103 "
Copernicus .....	100 "
Gustavus Adolphus.....	98 "
Montalembert .....	96 "
Bunsen .....	95 "
Ptolemy .....	95 "
Watt .....	94 "
Dumas, the Elder.....	93 "
Goethe .....	92 "
Pope .....	92 "
Whittier .....	91 "
John Hunter.....	90 "
Bach .....	87 "
John Herschel.....	85 "
Robert E. Lee.....	78 "
Charles Darwin.....	78 "
Abraham Lincoln.....	76 "
Grant .....	74 "

*In a list of 571 eminent men, with 860 birth ranks thus studied, the rate of breeding showed an average of 40.7 years from father to son, instead of the New England 33. If the probability of being eminent when born of a father between thirty-five and forty, is taken as unity, the probability if born at twenty-five is less than one-fifth as great. Ascending the age scale, the probability at fifty to fifty-five is five times that at*

*thirty-five or forty; and over sixty, it is over ten times that.*

#### SOME HISTORICAL EXAMPLES

Alexander the Great was the son of Philip of Macedon when Philip was 26 years old. Philip himself was born when his father, Amyntas II, was 63; Amyntas II, in his turn, was the grandson of Alexander I, 90 years covering the two generations intervening.

Aristotle was the son of Nicomachus at 58, who was himself the son of an old man.

Confucius was the son of his father at 71, his mother being the youngest daughter of a governor. If it is asked what became of Confucius' blood, it may be added that his only son was born when Confucius was 19.

Benjamin Franklin was the son of Josiah Franklin at 51, who in turn was the son of his father at 57, in his turn the son of his father at 70. "Franklin was the youngest son of the youngest son for five generations back," that is, all five ancestors were the sons of the parent's mature years. Franklin was the son of his mother at 50. Franklin's only son was born when Franklin was 23, and was of but average ability.

Goethe was the son of his father at 39, who, in turn, was the son of his father at 53. Goethe's mother was 38.

Lamarck's father was 42 when the illustrious son was born. The father was himself the grandson of De Monet born over 110 years earlier.

Louis XIV and known as "great" was the son of Louis XIII at 48. Contrast with this the time of birth of his descendants, which shows sons and grandsons at no time above 28 years and as low as 19.

On the Mendelian basis it should, of course, make no difference when in the life story of the father or mother a son is born. The quality being there and fixed, the sons of the young should be as good as the sons of the old; or, put another way, slow breeding should not necessarily show up in the life histories of the human families which are possessed of known intellectual quality. Yet the life histories of the Edwardses, the Wedgwoods and the Darwins do show it.

Jonathan Edwards was the son of Timothy Edwards at 34, who was the son of Richard Edwards at 22, who was the son of William Edwards at 47. The mother of Timothy was Elizabeth at 36, herself the daughter of William Tuttle at 36. The mother of Jonathan was Esther, daughter of Solomon Stoddard and Esther Warham at 28, who was the daughter of John Warham at 44. The average rate of breeding is here 35.2 years.

Josiah Wedgwood was the son, at 43, of Thomas Wedgwood who was the son of his father at 27.

Charles Darwin was the son of Robert Darwin

at 43, himself the son of Erasmus Darwin at 35, from the date of whose birth to the date of birth of his great-grandfather was 111 years. The mother of Charles was approximately 35 when he was born, being herself the daughter of Josiah Wedgwood at 43.

It might now be urged that the illustrations here chosen are all selected, and that objecting students of heredity could find evidence of a wholly contrary nature. Desire to produce such has often been expressed, but no one has thus far come forward with it. The histories of great men are open to everyone, and there are prizes to be won for bringing such contrary evidence.

#### SOME PRACTICAL DEDUCTIONS

What now are some of the practical truths to be deducted from all these facts? There has been, first of all, much unfortunate effort by the proponents of the separate theories to make the Lamarckian principle and that of Mendelian inheritance mutually exclusive.

The two views can, without compromise, go hand in hand; and for the thinker in biological and human problems, it is only necessary in any specific instance to see to it that proper weight is given to each of the two elements, and to keep clearly in mind what each idea, if put to work, can accomplish. The old saying has it that "heredity is something which a father should never forget, and a son never remember." In plainer terms, a parent should take stock of the articles of his Mendelian inheritance, and, when good, see to it that they go on in undiminished or increased vigor to his children. If of the fortunately endowed of this earth, and married to such another, he could, as a pure Mendelian, merely lie back and feel secure that quality will reappear in his children. But if he is a Lamarckian, he knows that eternal vigilance is required in addition. *A too happy satisfaction in having been born biologically rich, breeds complacency; of complacency, self-satisfaction; and of self-satisfaction, ruin. Conversely, a decision that he is nothing, the determination that he will strive and strive mightily and then beget his children, may mean in the new generation, the start of the superman.*

And here it is that there enters the gospel of hope. I confess that ardently as I have pleaded, and still hold, that due consideration be given the Mendelian law, conversely depressing has seemed to me the corollary that cursed are forever the lowly of physique, of mind and of soul. I would not now too lightly give support to the soft hand of sentimentality, in its protection of the submerged and largely useless lowermost human fraction. I set no such stock by it as do industrial chiefs with their eternal cry for cheap (and feeble-minded) labor. But for those who stand above this, in the middle ground, the philosophy and the practice which rewards effort with new and better characters, and which shows the way



of transmitting these superior characters to an oncoming generation, is full of the better cheer. Though the family of our neighbor may begin with the advantage of richer ground, ours may, through better effort, equal and excel his.

The sluggardly in mind have seen in what is written here only the hidden corollary that it is well to marry late, and to beget children later still. Maybe so, but is this all? There is the better mandate to ponder the facts and to discover more. *If the laws of Lamarck are binding, there is the obvious order to work and to work without ceasing,—to use to the full the faculties of body, mind and soul. Those who feel themselves the appointed of God may see to it*

*that opportunity for all this is provided in schools, in universities, in public opinion; or they may supply the means for stupid labor, sweating clerkships and the quiet of armed guards. These are the environments with which we surround the living mass, and to which we challenge it to react. In its quality and in the quality of the children, is written nature's opinion of the efficacy of our methods. Surely the lords and geniuses sprang and spring from the middle class because of these things; and because of them also, and in spite of trust funds and solicitous trustees, do the lords perish and return in a generation or two to their own.*

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## Is Epilepsy Curable? \*

C. W. King, M. D., Dayton

Editor's Note.—While many of the ablest medical minds of the country have been busy devising new and novel methods for dealing with epilepsy, nothing of permanent or intrinsic value seems to have been developed. Dr. King attempts to go back to fundamental principles for a basis of his therapy. He considers epilepsy as an endogenous toxæmia, chemical in character, and due to disordered metabolism. While there is still much to be learned about the underlying physio-pathological chemistry of disordered metabolism, the condition itself is amenable to empirical treatment. Proper environment, healthful exercise, a balanced diet, a few simple drugs to relieve constipation and restore digestive function encompass the routine treatment. Country environment is preferable and exercise should be moderate. The diet should consist of cereals, breadstuffs, vegetables and ripe fruits. Animal protein should be eliminated, and only very gradually resumed. Dr. King has found turkey rhubarb root in combination with sodium-bicarbonate, ipecac, and nuxvomica very efficacious in obviating constipation and bringing digestion up to par. Anaemia requires the exhibition of iron. Dr. King makes other valuable suggestions to round out this line of treatment, which has been so successful in his hands.

ONE of the saddest afflictions which can come to an individual is epilepsy; it is also probably the disease most neglected by the medical profession, for the reason that in the past this condition has been considered incurable; but now as a result of very limited recent experience, and advanced knowledge of physiological chemistry, since we know it is possible to cure some cases, it becomes one of the most interesting pathological conditions to the medical profession, and instead of consigning the unfortunate victim of this disease to a life in some institution we have reason to make an effort to cure him.

### KINDS OF EPILEPSY

In the past the literature of this disease very generally recognized two forms, namely, traumatic and idiopathic; the former due to brain injuries, and if treated surgically early enough usually curable.

For the purpose of this paper the latter form only will be considered. It is decidedly interesting for two reasons: first, because it is only recently that the nature of the causes of this type

of the disease has been known, not generally, but to those especially interested; and second, because the percentage of cures possible as a result of proper treatment is so much larger than is generally supposed.

The treatment of epilepsy is still more or less empirical because of lack of exact knowledge of its physiological and pathological chemistry and bacteriology.

Our men, however, who are doing research work in this line are on the right track, and I predict that in the near future we will be treating epilepsy with the same exactness and the same confidence of obtaining definite results, as we now treat syphilis or typhoid fever.

### THE REAL CAUSE

At the present time there is a difference of opinion, among the men who are especially interested, as to the etiology and therapy of epilepsy. All agree, I believe, that the condition is due to an endogenous toxæmia; some claiming that the toxæmia is of bacterial origin and that they have demonstrated the bacillus epilepticus; but a large majority are of the opinion that the toxæmia is chemical in character and due to disordered metabolism. My own experience in the treatment of Epilepsy and careful observation of

\* Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during its 73d Annual Meeting at Columbus, May 6, 1919.

its results, have made me very firm in the belief that the latter view is the correct one.

An endogenous toxæmia chemical in character and due to disordered metabolism is, I believe, the real cause of Epilepsy.

Not only is this condition the cause of Epilepsy but it is also the cause of such symptom groups, called diseases, as neurasthenia, migraine and other neuralgias and myalgias, rheumatism, gout, chronic nephritis and diabetis mellitis, and I will say, *four-fifths* of the chronic complaints, excepting those due to syphilis and gonorrhea which we see in the practice of medicine.

#### DISORDERED METABOLISM

We have still much to learn concerning the actual toxic substance giving rise to these symptoms or clinical pictures of disordered metabolism, the actual composition and properties of these substances, and the protoplasmic and systemic reaction to them: and until physiological and pathological chemistry works out these problems we must be more or less empirical in treatment.

The term *Disordered Metabolism* does not satisfy the thoughtful, analytical mind as the cause of such a large number of serious symptoms, and the logical query remains—what is the cause of disordered metabolism? The answer to this will be final, so far as the actual cause of Epilepsy is concerned, and the answer is, the long continued use of a badly balanced diet in connection with defective elimination.

With an improper diet and defective eliminative functions given as a cause for a pathological condition, at first thought it would seem to be a very simple matter to cure a large percentage of the cases; but not so, the element of individual differences of constitution always plays an important role in the treatment of most all diseased conditions.

#### TREATMENT

The therapeutics of the treatment of Epilepsy is quite similar in all cases, but the *materia medica* must be varied to suit the individual needs.

In beginning the treatment of a case of Epilepsy the first feature of the treatment, though not the most important one to consider, is the environment of the patient; when it is possible to do so the patient should be so located that as nearly a perfectly physiological life as is possible to obtain can be lived by the patient. He should be placed in the country where both mental and physical rest, relaxation and comfort can best be had; he should live out of doors as much as possible and indulge in daily gentle exercise—nothing better than walking leisurely or playing golf. These measures greatly increase the oxidation of waste and toxic substances and improve digestion and elimination, and it is sur-

prising how much improvement will frequently result from these measures alone.

If for any reason it is impossible to place your patient within this ideal environment, do not conclude that you cannot cure him and lose interest in the case. He can be cured without this very helpful feature of the treatment.

A properly balanced diet, efficient elimination, proper exercise and a few simple drugs to assist in relieving the usual constipation, bringing the digestive functions up to normal, thereby stopping the manufacture and retention of the intestinal toxins will cure a large percentage of cases, even with *not* very good environment. *Nine-tenths* of the cases treated by me and to which this paper refers were living in very poor surroundings.

#### DIETETIC REGIME

In selecting a diet very careful consideration should be given to the patient, not as a victim of Epilepsy alone, but as an individual; a proper conception of the personal variations from the normal is very important and sometimes will mean the difference between success and failure in the treatment of a case.

As a general rule Epileptics should be given a diet with a *lower* percent of protein than is *proper* for the average person and *much lower* than is usually *consumed* by the average person. Another point to be considered is that Epileptics do not bear excess of animal protein as well as they do that from vegetable sources, therefore, in the beginning of treatment it is well to withdraw all meats, and also eggs, and explain to the patient the importance of doing this for a while, but promise that when he begins to show indications of improvement you will likely feel justified in allowing him some meat once daily.

If you cut all meat and eggs out of the diet in an arbitrary manner and without any explanation, about twenty (20) per cent. of these patients will refuse to keep faithful in the matter of diet and your efforts will fail.

The patient should also be allowed but a small portion of such vegetables as peas, beans and cabbage, for these contain a high percentage of protein. The permissible vegetables are spinach, lettuce, carrots, turnips, tomatoes, asparagus tips.

Without special restrictions, the following things *can* be allowed: soups, breads of all kinds—preferably graham—butter, toast, baked or boiled potatoes, rice, oatmeal, cream of wheat, shredded wheat biscuit, corn meal mush.

Practically all of the ripe fruits and fruit juices in season are permissible.

The patient should be properly impressed with the harmfulness of *overloading* the stomach with even the *blandest* food; this will always give trouble. For this reason all desserts should be prohibited, for a dessert is nothing more nor less than a temptation to take more food than we



really need or want. In lieu of the usual desert benefit will be received by eating some raw ripe fruit after each meal.

Alcoholic drinks of all kinds, tea and coffee, should be prohibited.

In children there should be some modification of the diet. Under eight or ten years of age no meat or eggs should be allowed in any case, and very careful attention should be given to prevent overloading the stomach with foods which are always permissible in proper quantities. Too much water, even, at or near the time of taking food is harmful. *And under no circumstances should the child be permitted to take food when much excited or exhausted from play or improper entertainment.*

The evening meal should be the least stimulating and of the lightest and most easily digested food.

These dietary restrictions of course are proper for perfectly normal children, and personally I believe that *normal* children should not have meat or eggs until they approach adult life.

#### DRUGS

The usefulness and efficiency of drugs in the treatment of Epilepsy are limited to their ability to correct errors in digestion, assimilation and elimination. In brief their function is to establish and maintain a normal metabolism. There are several drugs which are more or less of value in this direction, but nature has given us one drug which is of much more value in maintaining a healthy and vigorous digestive tract including the liver, stomach, intestines and intestinal flora, than all the others combined. That drug is turkey rhubarb root. It is not only the best kind of a laxative; it is a tonic and a stimulant to the entire digestive system. It is antiseptic and a *strong* preventive of destructive fermentation of all kinds. I have used it in all cases of Epilepsy, usually in combination with sodium bicarb and small doses of ipecac, and in many cases with tincture of nux vomica. The stock formula made by Squibbs and listed as Rheubarb Ipecac and Soda Compound, No. 3, I use more than any other. In some cases the nux vomica is not advisable; then the same formula, with the exception of the nux, No. 2 is best to use.

For my own purpose I have a very similar formula with the exception that the dose of rhubarb is larger, for the simple purpose of avoiding the necessity of giving so many tablets each day. In some cases, of long standing, when the condition of the intestinal canal is very bad, much help is derived from a calomel purge every week or ten days to assist the rhubarb. Sulphate of quinine in small doses as a tonic and as an additional intestinal antiseptic is often helpful in these more obstinate cases. Quinine I usually give only in the beginning of treatment and continue it until the intestinal toxins seem to have been eliminated.

Practically all Epileptics when they come to you for treatment are more or less anaemic; a large majority of them very anaemic, due chiefly to the long continued toxæmia and to the drugs which are usually given, viz: the bromides and other motor depressants which so paralyze the motor centers that it is impossible for the patient to have a violent convulsion. *These drugs are not curative in any sense and should never be given, with this exception: occasionally there will be a case with stubborn insomnia, then it is advisable to give a proper dose of sodium bromide with chloral at bedtime, only for a few nights.*

This anaemic condition should receive careful consideration if it does not disappear promptly after proper treatment of the Epilepsy has resulted in noticeable improvement. Iron, of course, gives the best results in treating the anaemia. In children Eisenzucker five grain after meals gives good results; in adults Bland's mass which has been properly handled, or Ferri-pomatum, or tincture of the chloride of iron give the best results.

You must realize in the beginning that all these patients are difficult to hold for a sufficient time to enable you to get encouraging results, for the reason that everybody considers the condition incurable, and if they do not see decided improvement after two or three weeks they lose faith and will not co-operate with you; therefore, the most delicate diplomacy should be used to this end from the moment you agree to treat the case. Do not forget that if you do succeed in holding your patient it is possible to have a large percent of cures with our *present* knowledge, and prospects of still larger percentage of cures within the near future, because rapid strides are being made toward a much more definite knowledge of intestinal toxin formation and disordered metabolism in general.

#### RESULTS

The following is a brief statement of results obtained from the treatment above outlined, of forty-two cases treated by me during the last sixteen or seventeen years.

Fifteen (15) were cured; ten (10) were greatly improved, to such an extent that the seizures were rare, and light in character so that they could pursue their usual avocations, then they gradually failed to give proper attention to their treatment or failed to report altogether. Six (6) were improved to a less degree; five (5) did not show any improvement. These were cases of very long standing in patients between forty and fifty-five years old. Two children, very young, died of exhaustion. The time required to effect a cure in these cases varied from three months to one year.

#### CONCLUSIONS

In conclusion I wish to state, that in my judg-

ment the most important suggestion made in this paper is not the suggestion as to the proper treatment of Epilepsy and the splendid results which seem possible, but the suggestion in reference to the great and valuable influence of a properly balanced diet upon the health of the human race in general. *It is my belief that, if a properly balanced diet were used by everybody, at all times, within the next two or three generations all such diseased conditions as neurasthenia, migraine and other neuralgias and myalgias, rheumatism, gout, chronic nephritis, and diabetes mellitis, would be eliminated and the average length of human life astonishingly increased.*

Nature, every day and everywhere, keeps before our eyes, object lessons which, if given proper consideration, would soon convince us that the human animal, though we consider ourselves to be omnivorous animals, was never intended to consume much animal food.

You all know that the dog, although a *carnivorous* animal, does not thrive if fed much meat, and during the period of his life before

maturity is much better without any meat whatever. Some claim this is because of his domestication, but this is manifestly not true, for of all the wild animals, those who live as natural laws intended, all of the larger, more intelligent and better natured species and those of greatest longevity are vegetarians; while the flesh-eating animals are smaller, shorter lived, less intelligent and of vicious nature.

Such a lesson as this should wake us up.

It is only logical to assume that if the human race was as wisely fed and cared for as a valuable horse in the hands of a competent horseman is fed and cared for, the poor human animal would be as free from disease and disorders of metabolism as the horse is.

Now, if this be true isn't it our first and most important duty as physicians to make every possible endeavor to the end that proper dietetics be taught the children of future generations from the first grade in the public schools to the end of the senior year in all colleges?

223 N. MAIN ST.

## Infection During Childbirth \*

H. J. Lower, M. D., Marion

Editor's Note.—Davis has shown that irrespective of the introduction of antiseptics into obstetrics that there is still a prohibited morbidity in labor due to meddling and unclean midwifery. Dr. Lower maintains forcibly that "given a woman in good health, delivered aseptically and treated thereafter in the same manner, then, unless infectious material is brought to her, she will remain in the same state of health." Of course systemic infections due to other causes may coincide with the puerperal period but these are not always in the control of the obstetrician. On the contrary the obstetrician must hold himself responsible for infections arising from exogenous sources. Hence the necessity for avoiding trauma during childbirth and unremitting aseptic precautions. Dr. Lower makes a valuable point in surgical prognosis when he notes that the more virulent types of infections are associated with a low temperature and a high pulse rate, while in the more hopeful cases the reverse is true.

**I**NFECTION during child-birth may take place any time from the first inception of labor until the completion of the third stage, or we might say, until the woman returns to her normal state.

If infection takes place during this period, the term *puerperal fever* may still suffice for the laity. It can have but one meaning for the physician, and this is septicaemia, blood poisoning, wound infection, the absorption of products of decomposition altered through infection into a virulent poison.

### THREE PRINCIPAL SOURCES OF INFECTION

*First:*—The atmosphere,

*Second:*—The body of the puerpera,

*Third:*—Material of an infection nature, or capable of causing an infection, brought in contact with the genital system of the puerpera.

Reference to the first two possible sources may

well be brief, as modern knowledge and belief have relegated them to the shelf of oblivion. They are the remains of erroneous teaching by former teachers of obstetrics. Atmospheric infection of the puerpera as a cause of septicaemia, is not a tenable one. Given a puerpera delivered after an aseptic fashion and cared for similarly afterward, and she may lie in an infected room, whether the infection be erysipelas, measles or scarlet fever, and the puerperium may be unaffected, so far as septicaemia is concerned. She may develop either of these acute infectious diseases, but they run their proper course, only modifying the puerperal state, in so far as they arrest retrograde metamorphosis is concerned, but let the erysipelas or the scarlet fever infection material be brought into direct contact with the wounded genitals of the puerpera and septicaemia may follow.

For three years the doctrine of auto-infection, played a prominent part in the so-called puerperal fever. It was contended that the poison

\* Read before the Section on Obstetrics and Pediatrics during the 73rd Annual Meeting of the Ohio State Medical Association, at Columbus, May 7th, 1919.



developed within the body of the puerpera, and led to those changes which produced septicaemia. Such a theory is untenable today.

Spontaneous generation of disease is not possible and again recognized causative agents of disease are never found in the healthy body.

Given a woman in good health, delivered aseptically and treated thereafter in the same manner, then, unless infectious material is brought to her, she will remain in the same state of health. Exceptions are sometimes noted in those cases where, during labor, an abscess of the ovary or of the tube ruptures and brings on or gives rise to a clinical condition like that of puerperal sepsis.

This infected material was in the tube or ovary before the inception of labor, therefore, it could not be classed as infection during labor.

#### PLACENTAL INFECTION

A woman of good health may be confined aseptically, but by oversight or carelessness, a portion of placenta, or a piece of membrane is left in the uterus. This decomposes, and if not removed the woman becomes infected.

But why does it decompose? Because, notwithstanding all our care, it has become infected. Not all cases become infected, as I have removed pieces of placenta and membranes days and weeks after confinement, without any infection. But those are the exception.

Thus far, then, our conclusion is, that the source of puerperal sepsis must be looked for outside the body, and that the infectious material must be brought to the body of the woman.

Now let us take a woman who has been recently delivered. We assume that the act of labor has been conducted aseptically and the lesion, if any, has been repaired, in order to close every possible avenue for the entrance of infectious material. Still there remains a wounded surface which offers a site for infection. You may take every precaution and still you sometimes get infection, when the person is below the normal standard of health; so that the body is unable to resist the micro-organism.

#### SITES OF INFECTION

Puerperal septicaemia, therefore, is never *endogenous* in origin. It is always *exogenous*. That is to say it emanates from without. Remembering, first, that we need a wound or abrasion, where the infection may enter, it is evident that any part of the genital tract may be the site of primary infection. The lacerated perinum or cervix and the wounded endometrium at the site of placental separation are the obvious points of infection.

Later on the abraded nipple may become infected, giving rise to mastitis with systemic infection. When we remember that the vascular supply of the sexual system is increased during

pregnancy, and when we recall the rich lymphatic supply of the same system, it is not surprising, that infection, starting in this locality should very readily spread to the various serous cavities of the body and be brought by the veins to every organ.

According to the site of the primary infection, the lesion at the start may be diffuse or not. Systemic infection, we repeat, supervenes, with greater or less rapidity, according as the point of primary infection is rich or not, in lymphatics.

Infections of the cervix or the body of the uterus, will cause systemic infection more rapidly than any other point, on account of the rich supply of lymphatics. Infection of the tubes and ovaries will arise more quickly there than from any other point.

Child bed infection entails simply the same changes as those which follow infection of a wound in any other part of the body aside from the puerperal state.

Again, it is the exception that the symptoms of infection of the system at large do not predominate over the signs offered by the local lesion. The point to remember is, that we may meet with septic, vulvitis, vaginitis, endometritis, metritis, salpingitis, oophoritis, peritonitis, cystitis, etc., and each may offer evidence of its presence, but the systemic disease is the same, the constitutional disturbance only varying according to the degree and the extent of the primal lesion.

#### ONSET AND SYMPTOMS

As a rule it is about thirty-six hours after delivery, that the first symptoms of septic infection manifest themselves.

Sometimes it is ushered in with a chill, but not always. If however, it is followed with a fever of a non-intermittant type, then, our first thought should be of septic infection.

A slow pulse is incompatible with sepsis in its early stage, but a rapid pulse is a danger signal. Either hemorrhage is impending, or else it may be septic infection. Danger from hemorrhage is practically at an end, thirty-six hours after delivery. At this period you can look out for septic infection.

If you find infection, it will be necessary at once, to make a thorough examination. Find the point or points of infection, and clean the parts antiseptically. As a rule, it may be stated, that the relation between the pulse and the temperature in the puerperal state is of exceeding value, from a prognostic as well as from a diagnostic standpoint. In acute septic conditions where the system is surcharged, as it were, with the poison, we have a rapid pulse and very low temperature.

As it were, the temperature ranging about 99° to 100° F. and yet the pulse rate averaging 120 to 140. This means a bad prognosis. Where the

infection is slight, we are apt to have high temperature while the pulse remains relatively slow.

The most virulent of all types of puerperal septicaemia is general purulent peritonitis. We generally have then a low temperature and high pulse rate; and often, also, a flat instead of tympanitic abdomen. In short the pulse furnishes a more reliable prognostic guide than does the temperature.

Grandin prefers packing the uterus with gauze

saturated with alcohol, but I have never used it, therefore, I am unable to say what the result is.

It is the duty of all who come in direct contact with the lying-in woman, to keep themselves not alone clean, but also free from those acute infectious elements, which through inoculation breed sepsis.

Remember that all infection comes from without.

118 OLNEY AVE.

## NEWS NOTES OF OHIO

*Toledo*—A post consisting of physicians, dentists and enlisted men of this city who served in the medical branches of the Army during the World War has been named the Frank Ferneau Post, honoring Dr. Frank Ferneau who died shortly after leaving service.

*Zanesville*—Dr. G. B. Trout has moved from Duncan Falls to this city.

*Lebanon*—The body of Dr. Henrietta Eason Holbrook, a former resident of this village, who died in Mobile, Alabama, December 6, from tuberculosis, was interred here. Dr. Holbrook practiced a number of years in Middletown and Lebanon.

*Loveland*—Dr. F. H. Lever has succeeded the late Dr. C. J. Spence as a member of the Clermont County Board of Education.

*Newark*—Following two years' Army service and post-graduate study in New York City and at John Hopkins, Dr. Victor R. Turner has resumed civilian practice here. During his military service Dr. Turner engaged in special X-ray study at Washington, D. C., and was in charge of the X-ray department at Camp Dix.

*Lorain*—Dr. William A. Pitzele, president of the Lorain County Medical Society, is recovering from an operation for appendicitis which he underwent on December 30.

*Peebles*—Dr. J. M. Brooke and family are spending the winter at St. Cloud, Florida.

*Rootstown*—Dr. Dwight S. Spelman, a native of this village and former practitioner at East Liverpool, was drowned December 18, while skating near Wards Island, New York City. Dr. Spelman was physician at the State Hospital on the island.

*Toledo*—Dr. Willard J. Stone of this city has moved to Pasadena, California.

*Elyria*—At the age of 91 Dr. Charles F. Cushing of this city has begun his fifty-ninth year as a practicing physician. In the pioneer days when Dr. Cushing made his calls on horseback, his territory is said to have extended to Cleveland on the east, Sandusky on the west and Wellington on the south.

*Dayton*—Dr. Otto C. Griep and two occupants

of his automobile received minor injuries recently when Dr. Griep's machine collided with a street car.

*Massillon*—Dr. Paul J. Alspaugh, a former member of the staff of Massillon State Hospital, has opened an office in New Philadelphia, Ohio.

*Marion*—Dr. William A. Charter, 77, was sentenced to an indeterminate term of from one to seven years in the penitentiary, December 22, after being found guilty by a jury of having performed an illegal operation, resulting in the death of a patient.

*Dover*—Dr. William R. Keller has been elected commander of Dover Post No. 205 of the American Legion, having an enrollment of 250 ex-service men.

*Cleveland*—Dr. William Gilbert Povey, formerly instructor of gynecology at Western Reserve Medical School, died recently in Detroit. Dr. Povey was a member of Lakeside Hospital staff in 1904.

*Bellevue*—Dr. F. Marion Kent of this city is plaintiff in a suit filed in Sandusky County against Guy Cassaro, claiming \$350.00 damages resulting from an automobile collision, when the defendant is alleged to have negligently driven into an automobile driven by the plaintiff's wife.

*Bellefontaine*—Dr. Joseph H. Wilson, veteran of the Civil War, celebrated his seventy-second birthday, December 31. Dr. Wilson is the oldest practicing physician in Bellefontaine, have located here in 1872.

*Zanesville*—Having received his honorable discharge from service as a lieutenant in the Navy, Dr. Thomas L. Sutton has become associated in practice with his father, Dr. Thomas Sutton.

*Toledo*—Three hundred persons attended memorial services honoring the late Dr. Julius H. Jacobson on the first anniversary of his death, December 21.

*Lewisville*—Dr. J. W. Webber has moved to Magnetic Springs.

*Cleveland*—Dr. and Mrs. J. M. Moore are in Florida where they will remain during the month of March.

*Woodsfield*—Dr. G. L. Glespie, a former resident of Masterton, has opened offices here.

*Lima*—Following release from Army service at Camp Mead, Maryland, Dr. J. R. Parry, Jr., a former practitioner of this city, has located in Philadelphia. He is a son of Dr. J. R. Parry of Woodsfield, Ohio.



## New Griswold Health Law Retains Many Beneficial Fundamentals of the Hughes Health Code

The Griswold law, enacted by the General Assembly late in December, makes these fundamental changes in the Hughes health code:

(1) It provides as separate health districts cities between 5,000 and 25,000 population, which under the original Hughes Act were incorporated in the general districts of their respective counties. Under the Griswold law, each municipality of 5,000 or over is a city health district and the townships and villages in each county make up a general health district.

(2) It makes optional with the district board of health the exercise of most of the powers which were made mandatory in the Hughes Act.

(3) It strikes out all the civil service provisions of the Hughes Act, leaving the district boards of health unrestricted in their choice of employees, except that the health commissioner in a general district must be a licensed physician.

(4) It leaves the question of whole-time or part-time employment of the health commissioner and subordinates, as well as the question whether any employees other than the health commissioner shall be maintained, to the discretion of the board of health. The Hughes Act required the employment in each district of a minimum staff including a health commissioner, a public health nurse and a clerk, all for whole-time service.

The net result of the Griswold Act is to leave health organization in the cities practically unchanged for the present, and to abolish the old township and village health organization, setting up in its place that of the new general districts. There are 88 general and 80 city health districts in the state, although this number may be changed by unions of districts, possible under the amended law on the same terms as under the original Hughes Act.

The amendments to the Hughes Act were rushed through the legislature in the brief session intervening between the summer recess and the holiday recess. The Griswold bill was passed December 19 and was filed with the Secretary of State without the Governor's signature, December 31. As it carried an emergency clause it became effective immediately. The amendments were prepared by rural members of the Assembly in the so-called Cornstalk Club. Changes suggested by the State Department of Health, designed to restrict the state subsidy to those districts employing a whole-time health commissioner, were rejected. The subsidy provision in the amended law is the same as in the original—a payment to each district of an amount equal to one-half the salaries paid to the health commissioner, public health nurse and clerk, up to a maximum annual payment of \$2,000 to any one district.

As soon as the Griswold bill became a law, the work of reorganizing the state's local health machinery, which had been suspended as a result of pending changes in the law, was resumed. As the old village and township boards of health became non-existent December 31, however, there was necessarily an interim during which the residents of the villages and townships were without health protection. This continued in practically all counties during the earlier half of January, but prospects at the middle of the month were that the general district health machinery would be in operation in many counties by February 1. The State Department of Health early in January addressed letters to members of district boards of health, members of district advisory councils, county prosecutors, county auditors and city mayors, explaining the Griswold law and calling attention to the danger of delay in building up the new health organization.

The Griswold law has a section providing for the continuance in office of general district health members chosen under the Hughes Act, except where such members are residents of cities, which are no longer included within the boundaries of the general districts. This section leaves the membership of 38 general district boards unchanged—31 of these representing counties which have no cities, and seven representing counties whose only cities were separate municipal health districts under the original Hughes Act classification. In the 50 other general health districts, selection of one or more board members to fill vacancies was the first step toward reorganization. This choice was to be made by the district advisory council.

The new law provides for the setting aside of general district budgets previously adopted and for the adoption of new budgets by general district boards of health, subject, as before, to the approval of the district advisory council. The general district budget is to be apportioned among the townships and municipalities in the district on the basis of tax duplicates, instead of the population basis provided by the Hughes Act.

The course of action recommended to general district boards of health by the State Department of Health was that all this preliminary action be taken in one joint meeting of the board and the advisory council, with the county auditor present to give information as to the financial situation in the participating townships and villages. In following this plan, the advisory council would meet first to fill vacancies on the board of health, if any vacancies existed. The board of health would then meet and adopt its budget, which would be submitted immediately for the approval of the advisory council. Following approval of its

budget the board of health would proceed to the selection of a district health commissioner.

The board of health and the health commissioner, the law provides, shall enter into a contract specifying the proportion of his time which the health commissioner shall devote to his office. The term of office shall not be longer than two years. The health commissioner appointed under the Griswold law is required, just as was the whole-time health commissioner provided for by the Hughes law, to carry out all orders of the district Board of Health and the State Department of Health, to enforce all sanitary laws and regulations in the district and to keep the public informed in regard to all matters affecting the health of the district. The health commissioner's salary is left to the discretion of the local board of health.

Where the Hughes law provided that of the five members of the general district board of health, two should be physicians, one an attorney, and one a farmer, the amended law requires only that one member be a physician.

In the city health districts, the old board of health continues in office under the Griswold law, according to the interpretation made by officials of the State Department of Health. By abolishing the office of "health officer" and establishing in its place that of "health commissioner," the Griswold law, it is generally agreed, created a vacancy which must be filled by the city board of health. There is, of course, nothing to prevent the appointment of the former health officer as health commissioner. The health commissioner may be placed under civil service if local regulations so direct. Employees other than the health officer, it is presumed, continue in service on the same basis as before January 1.

There may be under the Griswold law, as under its predecessor, a union between two general districts or between a city and a general district. In the latter case, the city board of health assumes jurisdiction over all of the combined district. The State Department of Health has advised that such unions should be carried out only when the city health department is in a position to extend adequate health protection to the entire combined district. In several counties consideration has been given to proposals that the city and the general health districts employ the same health commissioner, each board of health retaining its independent existence and each contracting with the joint health commissioner for a given share of his time.

The State Department of Health, while it considers the Griswold law a less satisfactory means of insuring health protection than the former Hughes Act, points out that any district can, if it chooses, obtain from the Griswold Act system benefits as great as were available under the Hughes law. Employment of a competent, whole-time health commissioner, with an adequate staff and adequate equipment, is as readily possible

now as it was before. The Griswold law merely permits a district, if it so chooses, to install inadequate health protective organization. State health officials hope that even in the opening year, several districts will take this view of the situation and will proceed to install health departments as complete as finances will permit. With the passage of years, it is expected, additional counties will gradually recognize the value of adequate health organization and will act accordingly. In taking up the work of reorganization under the Griswold law, the State Department of Health announced that it would give freely of its advice and information, but would not attempt to force any health district to go further than its board believed necessary in providing for health protection. With only 168 health districts in place of the former total of 2150, the new health law, it is believed, offers a basis of organization that is fundamentally more efficient than the old village and township plan.

#### Small Advertisements of Interest

*For Sale*—Good eye, ear, nose and throat practice in city of 30,000; established over 18 years. Good hospital service, fine office location, no real estate. Price \$1,500 cash. Address H. B., care *The Journal*.

*Cash for your old accounts*—Is surely and quickly realized when we do your collecting. Collections made anywhere. Pleased clients everywhere. Charges 25 per cent. to 50 per cent. No collection; no pay. Write for particulars or mail accounts now. Inter-State Mercantile Agency, Chillicothe, Ohio.

*For Sale*—To physician at less than cost, or easy terms, a modern home, office and garage on public square in well improved town of 1,000 inhabitants, surrounded by fine farming country with good roads. Good business; only one active physician in competition; outside competition six to fourteen miles distant. Will do what I can to start new man, as I wish to retire. Young man preferred. Address T. W., care *The Journal*.

*Wanted*—Physician 29 years of age, graduate Ohio State University Medical College and Johns Hopkins; 17 months' hospital experience; is interested in hearing of location desiring physician, or assistantship to established practitioner. Prefers general practice, but is able to assist in surgery. Write J., care *The Journal*.

*For Sale*—I buy, sell and exchange physicians' supplies—instruments, furniture, books and appliances. Write for particulars. S. C. Priest, 138 E. Main Street, Newark.

*Physician Wanted*—The village of Masterton, Monroe county, needs a physician. Space of 12 or 15 miles without medical service.

*For Sale*—Large brick dwelling house with extensive grounds suitable for private hospital or sanitarium; located in Fostoria, Ohio, city of 10,000 population, five railroads and three inter-urban lines. No public hospital in city. Inquire: C. A. Guernsey, Fostoria.



# Help to Put Your County in the One Hundred Per Cent. Column by Paying Your 1920 Dues. If You Have, See That Your Neighbor Is in Good Standing

January 1 came and went and simultaneously the majority of members of the State Association paid their 1920 dues. While the number qualified in January this year is slightly below the number paid up at a similar period last year prospects are bright for a membership that will surpass previous enrollments. The hopeful feature is seen in the fact that the present enrollment already includes more than 150 absolutely new affiliations and a large number who have come back after a lapse in their membership of several years.

As the forms for this issue close (January 16), 3343 members are in good standing. One-third of last year's membership is still outstanding and this is the last issue of *The Journal* that will

be mailed to them. Exorbitant cost of printing and paper at the present time makes it impossible to keep the names of unpaid members on the mailing list for several months after membership has lapsed, as has been done in previous years. In addition these members are temporarily without medical defense protection and other Association benefits.

The following counties have qualified for the One Hundred Per Cent. Club for 1920 by remitting for a number of members equal to or greater than the number enrolled in 1919. They are tabulated in the order in which they qualified as members of the elect circle and the comparative enrollments for the present and past year are given.

## One Hundred Per Cent.

County	1919 Membership	Paid to Date	County	1919 Membership	Paid to Date
1. Geauga, Oct. 19, 1919.....	7	8	9. Hocking, Dec. 31, 1919.....	9	9
2. Morgan, Nov. 11, 1919.....	11	14	10. Marion, Dec. 31, 1919.....	53	54
3. Jackson, Dec. 16, 1919.....	20	20	11. Ross, Dec. 31, 1919.....	34	36
4. Huron, Dec. 17, 1919.....	21	25	12. Clermont, Jan. 1, 1920.....	19	19
5. Defiance, Dec. 19, 1919.....	12	13	13. Fayette, Jan. 1, 1920.....	12	13
6. Holmes, Dec. 22, 1919.....	11	12	14. Athens, Jan. 2, 1920.....	50	50
7. Morrow, Dec. 24, 1919.....	12	12	15. Shelby, Jan. 3, 1920.....	18	18
8. Hancock, Dec. 31, 1919.....	37	38	16. Meigs, Jan. 9, 1920.....	13	13

These counties are not yet one hundred per cent., but all but three have made good starts and have advised headquarters that they expect to be in within a short time. Special credit should be given to the five counties designated by the as-

terisk. They are in reality qualified for one hundred per cent. membership, but have been unable to attain last year's record because of deaths or removals from the county and no new physicians eligible to membership have taken these places.

## Making Progress

County	1919 Membership	Paid to Date	County	1919 Membership	Paid to Date
*Adams .....	20	17	Franklin .....	357	193
Allen .....	82	43	Fulton .....	27	24
Ashland .....	23	22	Gallia .....	24	21
Ashtabula .....	40	34	Greene .....	41	29
Auglaize .....	32	23	Guernsey .....	26	17
Belmont .....	58	32	Hamilton .....	473	282
Brown .....	12	11	Hardin .....	23	13
Butler .....	69	42	Harrison .....	15	9
Champaign .....	28	22	Henry .....	23	19
Clark .....	70	64	Highland .....	25	21
Clinton .....	25	20	Jefferson .....	52	34
Columbiana .....	77	64	Knox .....	31	18
Coshocton .....	23	16	Lake .....	25	20
Crawford .....	37	35	Lawrence .....	29	18
Cuyahoga .....	548	378	Licking .....	45	28
Darke .....	47	38	Logan .....	41	35
Delaware .....	30	17	Lorain .....	69	58
Erie .....	35	30	Lucas .....	258	187
Fairfield .....	38	31	Madison .....	20	14

County	1919 Membership	Paid to Date	County	1919 Membership	Paid to Date
Mahoning .....	121	97	Sandusky ... ..	33	22
Medina .....	24	16	Scioto .....	57	49
Mercer .....	30	21	Seneca .....	31	22
Miami .....	41	....	Stark .....	128	121
Monroe .....	9	1	Summit .....	196	84
Montgomery .....	167	162	Trumbull .....	43	19
Muskingum .....	54	34	Tuscarawas .....	46	37
Noble .....	10	9	*Union .....	21	20
Ottawa .....	13	12	Van Wert.....	31	19
Paulding .....	20	11	Vinton .....	6	....
Perry .....	22	14	*Warren .....	30	26
Pickaway .....	27	24	Washington .....	36	....
*Pike .....	12	10	Wayne .....	30	27
Portage .....	27	17	Williams .....	32	17
Preble .....	21	18	Wood .....	44	29
Putnam .....	30	25	Wyandot .....	9	7
*Richland .....	54	53			

## MEETINGS OF THE CLEVELAND ACADEMY OF MEDICINE

(C. L. McDonald, M. D., Secretary)

The one hundred and fifty-seventh regular meeting of the Academy of Medicine was held December 19, with President Frank Oakley in the chair. Annual reports of the secretary, treasurer and the various committees were read and approved. The essayists of the evening were Drs. Carl J. Wiggers and Roy W. Scott, the former speaking on "Newer Conceptions of Cardiac Physiology," and the latter on "The Clinical Disorders of the Heart Beat, Illustrated by Electrocardiographic Records." The tellers reported the election of the following officers for 1920: President, R. H. Birge; vice-president, W. E. Shackleton; trustees, H. A. Berkes and David Marine. The retiring president thanked members of the council and the academy for their cooperation during the past year and called attention to the problems facing the profession in the immediate future. Attendance, 150.

At a special meeting of the council of the academy held on January 6 for the purpose of organizing for 1920, Dr. Lester Taylor was unanimously elected secretary-treasurer of the Council, and the following committee chairmen were elected: Dr. Clyde Cummer, program committee; Dr. J. J. Thomas, public health committee; Dr. L. S. Brookhart, membership committee; C. W. Stone, civic committee; Dr. H. L. Sanford, legislative committee. The University Club was selected as the meeting place for the coming year.

## COUNTY SOCIETIES

### FIRST DISTRICT

*Clinton County* Medical Society has elected Dr. Robert Conard of Blanchester as president; Dr. Glen Dennis, vice-president; Dr. Henry Brown of New Vienna, secretary-treasurer, and Dr. C. A. Tribbett, state delegate. Drs. E. Briggs and C. E. Kinzel, both of Wilmington, are the retiring president and secretary, respectively.

*Fayette County* Medical Society, in session at Washington C. H. on January 6, reorganized for the coming year with the following officers: H. L. Stitt, president; A. O. Erwin, vice-president; Lucy W. Pine, secretary-treasurer; R. M. Hughey, delegate, and E. F. Todhunter, alternate. In the future the society will hold luncheon meetings at the Cherry hotel on the first Tuesday of each month, devoting a period of two hours following the luncheon to scientific discussion.—Lucy W. Pine, Correspondent.

### SECOND DISTRICT

*Darke County* Medical Society's regular monthly meeting, held in Greenville, January 8, was attended by 28 members and guests. The program consisted of two excellent papers. Dr. Robert Austin of Dayton presented a paper on "Diagnosis of Goitre," and Dr. Robert Reid of Union City, Indiana, spoke on "Gun Shot Wounds and Fractures," illustrating with lantern slides. Drs. J. B. Ballinger of Versailles, Donovan Robeson and William Lynch of Greenville were elected to honorary membership in the county society.—R. F. Metcalfe, Correspondent.

*Montgomery County* Medical Society, meeting in regular session January 2, heard addresses by



Drs. R. S. Binkley and A. G. Farmer. Dr. Binkley's subject was "Acute Trachoma," discussed by Dr. A. E. Hewitt, and Dr. Farmer reported two cases of brain abscess of otitic origin which were discussed by Dr. Horace Bonner.

*Clark County* Medical Society held its annual election of officers, December 22, with the following results: President, R. C. Hebble; vice-president, W. E. Bright; treasurer, F. P. Anzinger; secretary, R. F. Boehme; delegate, J. J. Moore.

### THIRD DISTRICT

*Allen County* Medical Society met in regular session at Lima Memorial Hospital, December 16, with 50 members present. Following a discussion of the subject of compulsory insurance the society went on record as opposed to such legislation. Dr. W. W. Beauchamp read an interesting paper on "Determination of the Kidney Function."

At the meeting of January 20, Dr. P. I. Tussing spoke on "Artificial Pneumo-thorax." A slight error was made in recording the society's new officers in the January issue, the correct roster being as follows: President, Charles Gamble; vice-president, V. H. Hay; treasurer, I. D. Baxter; secretary, E. C. Yingling;—E. C. Yingling, Correspondent.

*Hardin County* Medical Society's annual election of officers resulted in the election of Dr. D. H. Bowman as president; S. C. Smith, vice-president; W. A. Belt, secretary-treasurer; B. K. Jones, state delegate; A. S. McKittrick, alternate; C. C. McLaughlin, legislative committeeman.

*Marion County* Medical Society held its first meeting of the year in Marion on January 6. Dr. Lunger, the retiring president, gave an appropriate address closing his administration, and inaugurated the following new officers into their positions: Carl W. Sawyer, president; M. B. Newhouse, vice-president; Maude L. Bull, secretary-treasurer; D. W. Brickley, censor; R. C. M. Lewis, legislative committeeman, and D. O. Weeks, delegate for two years. Dr. Sawyer's inaugural address took up some of the problems of the county society, especially those relating to the importance of continued research; the need of harmony among members; legislative developments; activities of the various cults and healers, and the place of the physician in reconstruction work. The present constitution of the society was discussed and a motion made to appoint a committee to redraft the constitution. Among other matters pertaining to new members and medical legislation, plans for programs for future meetings were discussed.

### FOURTH DISTRICT

*Defiance County* Medical Society has re-elected Dr. J. J. Reynolds of Defiance as president. Dr. G. W. Huffman was chosen vice-president at the recent election, and Dr. D. J. Slosser succeeded Dr. R. W. Finch as secretary-treasurer.

*Paulding County* Medical Society has chosen

Dr. L. R. Fast, J. U. Fauster and C. E. Huston of Paulding as president, secretary-treasurer and delegate, respectively, for the ensuing year.

*Ottawa County* Medical Society, meeting in Oak Harbor on January 9, enjoyed a symposium on "Fractures," conducted by Dr. B. J. Hein of Toledo. Interesting papers were presented by Drs. Hein and Ingraham. A revision of the county fee schedule was considered and it was decided to allow each locality to determine its own schedule. Officers elected for 1920 were: A. A. Brindley, Port Clinton, president; H. Langholz, Oak Harbor, vice-president; S. T. Dromgold, Elmore, secretary-treasurer, and H. J. Pool, Port Clinton, legislative committeeman.—S. T. Dromgold, Correspondent.

*Sandusky County* Medical Society was the guest of Dr. C. I. Kuntz of Fremont at the regular monthly meeting on December 11. Dr. C. R. Pontius was elected president; Dr. E. W. Baker, vice-president; Dr. C. I. Kuntz, secretary; Dr. W. H. Booth, treasurer. Dr. Pontius was elected delegate, and Dr. F. L. Moore alternate to the annual meeting of the State Association.

*Williams County* Medical Society devoted its meeting of January 15 to a symposium on diphtheria. New officers of the society are C. M. Barstow, president; H. H. Patton, vice-president, and J. A. Weitz, secretary-treasurer and state delegate.

### FIFTH DISTRICT

*Erie County* Medical Society, in session at Sandusky December 30, chose the following officers for 1920: President, F. F. Lehman; vice-president, Fred Schoepfle; secretary-treasurer, F. J. Leblieq; delegate, Henry Schopfle, and alternate, J. D. Parker.—F. J. Leblieq, Correspondent.

### SIXTH DISTRICT

*Columbiana County* Medical Society, meeting in Salem December 9, elected Dr. P. C. Hartford of East Palestine as president, succeeding Dr. A. W. Schiller of Salem. Dr. S. A. Conrad of Leetonia was made vice-president, and Dr. J. M. King of Wellsville was re-elected to his post as secretary.

*Holmes County* Medical Society held its regular quarterly meeting in Millersburg December 10. Drs. J. C. Elder and A. T. Cole were re-elected as president and secretary-treasurer, respectively, and Dr. M. B. Pomerene was made vice-president.—A. T. Cole, Correspondent.

### SEVENTH DISTRICT

*Coshocton County* Medical Society held its annual meeting on December 31 and elected the following officers for the new year: Jesse McClain, president; Samuel Cohen, vice-president; J. D. Lower, secretary-treasurer; E. C. Carr, state delegate.—J. D. Lower, Correspondent.

*Jefferson County* Medical Society's meeting of January 13 was addressed by Dr. B. F. Harden of Wellsburg, West Virginia, whose subject was

"Empyema of the Chest."—J. R. Mossgrove, Correspondent.

*Tuscarawas County* Medical Society listened to an interesting paper by Dr. Paul J. Alspaugh on "Maniac Depressive Psychosis" on January 13. Dr. Alspaugh recently located in New Philadelphia, having moved to that city from Massillon where he was a member of the staff of the state hospital.—E. D. Moore, Correspondent.

#### EIGHTH DISTRICT

*Guernsey County* Medical Society, in regular monthly session at Cambridge on December 18, elected Fred W. Lane, president; C. A. Craig, vice-president, and F. M. Mitchell, secretary-treasurer. In the latter position Dr. Mitchell succeeds Dr. A. B. Headley, who has served several terms in that capacity in addition to his duties as councilor of the Eighth District of the State Association.

#### NINTH DISTRICT

*Jackson County* Medical Society met at Wells-ville on December 2. The entire assembly participated in a discussion of the Army hospital treatment of pneumonia with 2 oz. Tr. Digitalis every 24 hours. It is the opinion of the society that the administration of such massive doses falls little short of premeditated murder. The physician had no use for his own opinion as to the needs of the patient after examination—he was ordered to give all cases that quantity of digitalis, with aspirin for fever and an opiate for rest. The profession of Jackson County would be interested in knowing who ordered this line of treatment for our pneumonia boys in the Army hospitals.—A. C. Ray, Correspondent.

*Lawrence County* Medical Society, in session at Ironton December 4, elected Dr. T. H. Remy, president; O. H. Henninger, vice-president; E. E. Ellsworth, secretary-treasurer, and Dan Gray, legislative committeeman.

*Scioto County*—Hempstead Academy of Medicine held its annual banquet at the Washington Hotel, Portsmouth, with 35 members in attendance. Dr. Rufus Hall of Cincinnati gave an interesting and instructive address on "Cancer, Its Symptoms and Cures." The results of the annual election of officers were announced as follows: President, William A. Ray; vice-president, T. H. McCann; secretary-treasurer, Harry Rapp; delegate, S. S. Halderman. Dr. O. D. Tatje is the retiring president and Dr. H. A. Greene the retiring secretary-treasurer.

#### TENTH DISTRICT

*Knox County* Medical Society, in session December 17, elected Dr. H. W. Blair, president; Dr. J. M. Pumpfrey, vice-president, and Dr. J. R. Claypool, secretary-treasurer.

*Delaware County* Medical Society's annual election resulted in the choice of Dr. F. V. Miller as president; Dr. I. T. McCarty, vice-president; V. B. Weller, secretary-treasurer; A. J. Pounds,

delegate, and C. W. Chidester, alternate.—A. H. Buck, Correspondent.

*Crawford County* Medical Society held its annual meeting in Galion, December 12. An elaborate banquet was followed by a business session at which the following officers were elected for the coming year: H. H. Hartmann, president; C. A. Marquart, vice-president; M. L. Helfrich, secretary-treasurer; P. A. Murr, state delegate, and C. H. King, alternate. Dr. Wells Teachnor of Columbus, councilor for the Tenth District, and Dr. J. A. Riebel, also of Columbus, were guests of the evening.

*Pickaway County* Medical Society met January 2 and elected J. B. May, president; G. G. Leist, vice-president and delegate; G. H. Colvill, treasurer; D. V. Courtright, secretary, and A. F. Kaler, alternate. Dr. R. S. Hosler of Ashville was elected to membership on presentation of credentials from Summit County Society. Dr. Leist, the retiring president, gave an interesting address dealing with the advance of medicine, especially in vaccine therapy. The next regular meeting will be in the nature of a banquet at which "the better two-thirds of the profession" will be invited. Drs. May, Allen and Courtright were appointed as members of a committee to arrange a program for 1920. Dr. Bales told some "funny ones" and then we all went home late.—D. V. Courtright, Correspondent.

*Ross County* Medical Society had an enthusiastic meeting in Chillicothe on December 3 and plans were laid whereby the society will come out of the lethargic state in which it has been for some time past. The annual election of officers was held and the following men were chosen to guide the society during 1920: President, G. E. Robbins; vice-president, O. P. Tatman; secretary-treasurer, G. S. Mytinger; legislative committeeman, J. M. Hanley. All members present enjoyed the meeting and expressed a desire that meetings be held regularly during the coming year and efforts be made to get all eligible physicians in the county into the fold.

The piece de resistance of the meeting of January 6 was a paper on "Appendicitis," by Dr. A. H. Dunn. The paper was not the usual stereotyped sort beginning with definition and ending with treatment, but handled the subject from the practical standpoint of a large operative experience, taking up points often omitted in superficial papers or brought out only during the discussion. Announcement was made that Dr. Martin H. Fischer of Cincinnati would address the February meeting.—G. S. Mytinger, Correspondent.

#### POST-GRADUATE STUDY AT W. R. U.

A teaching staff of 35 members has been announced for the post-graduate courses which will be conducted by Western Reserve School of Medicine, Cleveland, during June and July has been announced.



## Health Insurance Committee of New York Medical Society Disapproves the Scheme; Suggests Extension of Preventive Medicine Facilities as Antithesis

1. There is no necessity for the institution of a scheme covering the major portion of the population of the state providing for the institution of contract medical practice on a colossal scale in order to furnish medical attendance and other services.

2. In those countries where this scheme has been in operation for many years, it has caused a deterioration in medical morale and medical service and that its effect in this state would be the same, that is, a lessening in the quality of medical service.

3. In comparison with those countries where this scheme has been in operation the United States shows a more marked reduction in mortality rate, both general and as affecting maternal and infantile mortality rate. Apparently the morbidity rate under the scheme has doubled instead of being diminished in Germany and Austria since the institution of the social insurance plan.

4. There is danger of the scheme gradually undermining the functions so extremely valuable to the community at present subserved by the State Department of Health.

5. Owing to the paucity of accurate and unimpeachable data collected by means of an unbiased investigation, your committee recommends that the legislature in 1920 be requested to appropriate a sufficient sum of money for the use of the health department, and such other departments in association with it, as it requires, for the purpose of making a survey of the State of New York to determine the amount and character of illness in its economical relation to the commonwealth.

6. If additional legislation is to be enacted, it should provide for a greater development of existing agencies for preventive medicine, together with the extension on a large scale of the present county and municipal functions for both preventive and remedial medicine, and it should make further provision for the inauguration of more widely extended utilization of the present institutional clinical facilities for the diagnosis and treatment of disease, in order to facilitate the access of the entire population of the state to modern methods in the practice of medicine.

The above are the conclusions and clear-cut recommendations of a special committee of the Medical Society of the State of New York, appointed at the last annual meeting for the purpose of studying the subject of compulsory health insurance and reporting back to a special meeting of the House of Delegates which was called

in November before the convening of the state legislature. The committee, consisting of 19 members, held six general meetings and numerous sub-committee meetings before drafting its report.

Social and welfare workers frankly express the belief that either New York or Ohio will be the first state in this country to test the merits of compulsory health insurance. However this may be, very similar bills have been introduced in the legislatures of both states and the physicians of Ohio, confronted by practically the same situation as those of New York, should be particularly interested in the New York committee's report.

Before making its recommendations the report offers a brief resume of the subject of the committee's study, covering the components of health insurance schemes, reasons advanced by proponents for its adoption and general features of the bill proposed in New York, as follows:

"The essential components of all compulsory health insurance schemes are two: first, the provision of a cash indemnity during a relatively brief period of incapacity to labor due to illness; secondly, the provision to the insured and their dependents during a determinate time of so called medical benefits which comprise medical, dental and nursing attendance, hospital and sanatorium accommodations, maternity attendance, drugs and all necessary medical and surgical supplies.

"The proponents of this legislation rest their demand for the institution of this scheme in America upon two main allegations: first, that a very large amount of poverty is due to illness causing consequent unemployment and loss of income; secondly, that a vast amount of the population receives *inadequate and insufficient medical attendance*, that is, that medical attendance is *grossly deficient both as to quantity and quality*.

"With the general features of the measures proposed for the legislative enactment of the compulsory health insurance scheme in this State your Committee will deal only in the briefest manner; the matter is familiar to you. It is proposed to establish an administrative machinery radiating downward from a division of the State Industrial Commission composed of a certain number of commissioners appointed by the Governor who in turn appoint a chief of the bureau of health insurance. Subordinate to the Commission and acting under regulations made by the Commission function the boards of directors of the local funds composed of three members elected by the employer members of the local fund, three elected by the employees and one additional elected by these six. All the affairs of the funds are administered locally by these boards of directors. Each local fund employs a medical officer who is permitted to practice and who is practically the medical supervisor of the administration of the benefits of the act. The medical profession is not represented upon any executive body under the proposed law, but is permitted to function solely through advisory committees, local and

state. Its sole statutory representative has an administrative, not an executive function."

After consideration of the evidence put forward by the proponents of this legislation in support of their statement that a large proportion of the poor have been impoverished through unemployment caused by illness, the Committee finds "that none of this evidence is unimpeachable and that it rests upon largely *a priori* reasoning. The preponderance of evidence is against the fact that any considerable amount of impoverishment is caused by illness; moreover in those cases where impoverishment is caused by illness, it is due to the long enduring disability preceding death occurring in the chronic diseases especially tuberculosis, chronic heart disease, cancer, chronic joint infections, renal and vascular disease which cause a disability long exceeding the periods of twenty-six weeks during which the insured is entitled to benefits under the scheme. The statistics of the Labor Bureau of New York State show that in the main disability from all causes including accident, injury and illness is the source of, on the average, only 5.7% of unemployment, about the same amount as that caused by weather conditions (5.6%) or a little less than half that caused by labor disputes (10.6%), or one-thirteenth that due to lack of work (74.6%). A survey entitled "Poverty in Baltimore and Its Causes; Study of Social Statistics in the City of Baltimore," by the Alliance of Charitable and Social Agencies, McCoy Hall, Baltimore, Md., November 15, 1918, gives strong evidence of the small part illness plays in the cause of poverty; moreover, it evidences strikingly the fact heretofore stated as to the relationship of prolonged disability not covered in any scheme for health insurance to the relatively few cases of impoverishment due to sickness. Your committee would find, therefore, that short illnesses causing ephemeral disability bear no relation to poverty; that where impoverishment is caused by illness it is in all instances due to long-continued disability; and that illness is but a very minor cause of unemployment as compared even to the conditions of the weather or labor disputes."

Issue is next taken with the contention of health insurance proponents that medical attendance in the State of New York is grossly deficient in quantity or grossly defective in quality, the committee failing to find any available evidence to bear out such a stand. "If these facts were true," the committee declares, "it is unable to satisfy itself that the people of this state would receive a larger and closer degree of medical attention where one physician may care for either two thousand or more patients as permitted under this scheme than they now receive where the proportion of physicians to population is about as one is to seven hundred eighty. Moreover, your Committee is satisfied that the quality of medical attention would no more be benefitted in the United States than it has in Germany, Austria and Great Britain, by the conversion of medical practice from its present plan into an enormous scheme wherein the practitioner would be employed from year to year under contract, and in the final analysis subject to lay dictation as to means and methods of practice."

Finally, before offering definite recommendations, the committee comments thus on the bril-

liant record of this country in disease prevention and the possible influence of health insurance in nullifying the activities of agents which have been largely responsible for this splendid work:

"Your Committee feels very strongly that the inquisitorial powers which would be conferred upon the State Industrial Commission and its agents, and upon the local boards of directors must be considered in its effect upon the public health, and especially as to the role it might assume in submerging and nullifying the activities of the present State Department of Health which has played so large a part in the reduction of morbidity and mortality by means of *preventive*, not *palliative*, medicine.

"There is no uncertainty about the evidence that the relative morbidity rate, mortality rate, infant mortality rate and maternal mortality rate, has been much more materially reduced in the United States during the past twenty years than it has been in Germany and Austria where compulsory health insurance not alone, but the whole scheme including invalidity and unemployment insurance and old age pensions, have been in force. It can, therefore, be seen that compulsory health insurance as such plays a very small part in the reduction of length and severity of illness and that on the whole it has been of extremely little value, medically, in those countries; while it has been the cause of a profound deterioration in medical service and medical morale. Even in England where it has been in operation for a comparatively short time it has proven so defective and ineffective for the purposes for which it was instituted that it is now proposed to inaugurate the plan of state medicine to supplant it."

#### CLAIMS DEPARTMENT CLOSES BUSY YEAR IN TIP TOP SHAPE

The close of 1919 found the work of the claims department of the Industrial Commission in excellent shape. One of the most encouraging features of the year's activities was the reduction of the number of pending claims on file in the Commission's office from 10,341 at the end of 1918, to 5,612 in 1919.

December was the busiest month of the year. During the month a total of 17,428 regular claims, involving those of state and public employees, were heard, an average of 800 claims daily for the 22 hearing days of the month. The largest number completed and presented on any one hearing day of the month was 1,227 on December 30.

In addition to regular claims, 603 special claims were presented. Of these, 66 involved payment for medical services in excess of \$200.00, the total amount approved for such excess expenses being \$7,226.48, or an average of \$109.43 for each claim. The department also reviewed 114 cases under Section 22 of the Workmen's Compensation Act.

#### AFTER LAW VIOLATORS

Dr. Walter Hartung, Lucas County coroner, recently reported to the county prosecutor a list of local hospitals and undertakers who have been lax in reporting deaths from unnatural causes, as required by law.



# THE CANCER CAMPAIGN

This department was inaugurated by the State Association's Committee on Control of Cancer for the purpose of keeping the profession in touch with the intensive campaign it has undertaken with a view to curbing the cancer menace. As part of the movement members of the committee have personally addressed, or have secured speakers to address a large number of county societies on this subject. If societies which have not devoted a meeting to the cancer question during the fall or winter, but are desirous of doing so, will communicate with State Association headquarters, naming a suitable date, the committee will arrange for speakers. The current paper is the fifth of a series prepared by Dr. Crotti to emphasize the fundamentals in cancer diagnosis and treatment.

## COMMITTEE ON CONTROL OF CANCER



Andre Crotti, M. D., Chairman  
Columbus

Chas. W. Moots, M. D., Toledo

Chas. E. Holzer, M. D., Gallipolis

Don K. Martin, Secretary  
Columbus

## Cancer of the Uterus

Andre Crotti, M. D., Columbus  
Chairman Committee on Control of Cancer

THERE are two great varieties of cancer of the uterus, namely, cancer of the cervix, and cancer of the body. These two forms of cancer vary not only histologically, but clinically as well.

### PATHOLOGY

*Cancer of the Cervix.*—The cervix up to the external os is covered with squamous cell epithelium, which differs from the ordinary epidermis of the skin only by the fact that it does not contain hair follicles, sebaceous, and sweat glands. Consequently, cancer originating in that portion of the cervix will be of the *squamous-cell* or *canceroid* type. It is a true epithelioma.

In the portion of the cervix extending from the external to the internal os, better known as the "endocervix," the epithelium of the mucous membrane is of the cylindrical, ciliated type, the lining cells of the mucous membrane and of the glands being mucoid cells; consequently, the endocervical cancer will be of the *adeno-carcinomatous* type. As a matter of fact, this is not always the case and a squamous-cell cancer is quite frequently found in its stead. This is due to the fact, especially in multiparae, that the squamous cell epithelium extends into the cervical canal and may be found, with occasional exception (islands of ciliated epithelium) throughout its entire lower third. In some instances, even in children, the entire cervical canal may be lined with squamous cell epithelium. Furthermore, it is not so uncommon to find a carcinoma of the adeno-carcinomatous type undergo metaplastic changes and be converted into a squamous-cell carcinoma. Thus will be explained the frequency of the squamous-cell cancer in the endocervix.

In conclusion we may say that we have two forms of cancer of the cervix, the *exocervical* cancer, and the *endocervical* cancer. The exocervical cancer shows a great tendency toward papillary

formations; hence, the name of cauliflower cancer; it has little tendency to extend toward the body of the uterus, but invades the vagina and bladder early. It extends to the parametrium and the regional lymphnodes much earlier than does the endocervical cancer.

The endocervical cancer, although capable, too, especially in the last stage, of giving rise to cauliflower formations, has rather the tendency to bore into the walls of the cervix, thus giving little or no external evidence of its presence for quite a long time. This treacherous form of cancer should always be borne in mind.

Of course, in late stages it is difficult, or even impossible to state if the cancer started at first as an exocervical or an endocervical one. The only diagnosis that can be made then is, "cancer of the cervix."

*Cancer of the Body.*—Cancer of the body is always of the adeno-carcinomatous type, except in very advanced stages where the adeno-carcinoma has undergone a metaplasia and has then assumed the character of a squamous-cell cancer. In some cases, cancer of the body shows a tendency to papillary formations protruding into the uterine cavity; in some others, it has the tendency to bore into the walls of the uterus, until finally there is little evidence left of muscular tissue. That is the deep, ulcerating form of cancer. Cancer of the uterine body does not invade the parametrium, as a rule, except in late stages, and then usually only by extension. Metastases in the regional lymphnodes occur later than in the cancer of the cervix.

### METASTASES

Here as in cancer of the breast, if it is true that metastases may sometimes take place through the blood vessels, in the great majority of cases cancer dissemination occurs through the lymphatic route. The lymphatic vessels of the cervix enter

the parametrium, follow the direction of the uterine artery and at the crossing of that artery and the ureter, we find the first lymphnodes. A little further up in the parametrium we find other lymphnodes which finally empty into the external and the internal iliac lymphnodes located along the external and internal iliac vessels respectively. The lymphatic vessels of the posterior surface of the cervix empty into the sacral lymphnodes.

The lymphnodes of the body of the uterus communicate with those of the cervix below, pass out as four or five trunks along the broad ligaments between the ovary and the Fallopian tubes, follow the ovarian blood vessels and empty into the aortic lymphnodes below the kidney.

The rapidity of cancer dissemination to the lymphnodes is largely dependent upon the duration of the disease and the portion of the uterus affected. The first to become involved are the lymphnodes of the parametrium and the iliac lymphnodes. Metastases in the lymphnodes may take place early; on the other hand, one may find the lymphnodes entirely free from cancer in a very advanced stage of the disease.

In exocervical cancer metastases occur much earlier than in endocervical carcinoma in the body of the uterus.

#### AGE INCIDENCE AND ETIOLOGY

Cancer of the cervix appears most commonly between the ages of forty and fifty years. It is, however, not uncommon between thirty and forty and quite a number of cases have been reported between twenty and thirty. The youngest case on record is that of cancer in a girl eight months old.

Cancer of the body of the uterus occurs most commonly between fifty and sixty. It is uncommon under forty.

Here, as in cancer of all the other organs, if we do not know the real cause of cancer, we know that certain predisposing factors exist which will favor its appearance. So far as the cervix is concerned, we know that from 96 to 98 per cent of the cases of cancer occur in women that have had children. Undoubtedly, lacerations with their natural consequences, namely, ectropion of the mucosa and erosions seem to offer a suitable ground for the development of cancer. The few rare cases of cancer of the cervix in virgins seem to originate from erosions of the cervix, although the true cause of the erosion is unknown.

On the other hand, cancer of the body occurs with preference in nulliparous women. It is much less frequent than cancer of the cervix. Furthermore, cancer of the body is very frequently associated with fibroid of the uterus.

#### SYMPTOMS AND DIAGNOSIS

*Cancer of the Cervix.*—The three cardinal symptoms of cancer of the cervix are leucorrhea,

bleeding, and pain, occurring in the order named.

*Leucorrhea* is at first due to increased secretion of the mucous membrane caused by hyperemia, and to an increased secretion due to the cancer itself. At first, this leucorrhea differs from that seen in endometritis only by its quantity and not by its quality. It is only in a later stage that the secretion becomes thin and watery. This condition is due to an increased quantity of serum which exudes from the capillary vessels. The thick, white and yellowish discharge is due to infection of the cancerous ulceration and to endometritis, which first accompanies or precedes the disease. Fetidity is due to a beginning necrosis of the cancer.

*Bleeding* is due to rupture of small blood-vessels in the cancerous mass. It is usually of venous origin and never threatens life by its abundance. Simple friction as coitus, vaginal examination, or vaginal canula, is enough to determine the rupture of such vessels. This rupture may occur, too, in conditions where local pressure is exaggerated as menstrual fatigues, efforts at defecation, etc. The pink, reddish, or serous discharge is due to a liquid secreted by the cancer itself.

*Pain* is the third cardinal symptom but is one of little value so far as diagnosis is concerned, as it usually is a sign of an inoperable cancer. That there is no pain in the beginning is partly due to the fact that the cervix is a peculiarly insensitive organ, but when the disease has invaded the parametrium and especially has involved the pelvic and sacral nervous plexuses, pain may become most excruciating.

Vaginal examination will give very valuable information as to the real nature of the condition present. If we have to deal with an exocervical cancer of the cauliflower type, the diagnosis will, of course, be very easy. We shall have there a tumor involving one or both lips of the cervix, irregular in surface, hard, and bleeding easily on touch. The vagina, parametrium and bladder may be found involved.

Friability of the tissues, with bleeding, is a most important sign and one that is practically always present in any cancerous ulceration.

In some instances the endocervical cancer is very difficult of diagnosis, as there may be no material enlargement and as the outward appearance, as observed through the speculum, may be perfectly normal. A watery discharge or bleeding is the only danger signal. The only difference between the discharge of that form of cancer and the one seen in endometritis and other conditions of the uterus is that it is thicker and more creamy, as distinguished from the thin, watery discharge of cancer. Locally, the only character that will be revealed will be a very hard cervix, especially hard in the carcinomatous portion, while the portion not yet involved will be softer.

In cancer of the body of the uterus, we find,



too, as cardinal symptoms, leucorrhea, bleeding, and pain. Leucorrhea affects the same type as that seen in cancer of the cervix. Pain is a late symptom of advanced cancer.

If we remember that vaginal examination will nearly always be negative in a case of incipient carcinoma of the body of the uterus, bleeding is perhaps the most important of all warning symptoms. It may be caused by fatigue, long walks, strenuous physical exercise, but sometimes it comes on without any apparent cause at all. If the patient is in the full activity of her genital life, she thinks the menstrual period is coming too soon; if the menopause is of recent date, she thinks this hemorrhage is in connection with the change of life, and if menopause has been established for a long time, she more or less rejoices and thinks she is not so old after all. This hemorrhage is scant, does not last long and appears again after a short interval and so on during which weeks and months pass in which the patient hopes in vain that it will stop.

In other instances the hemorrhage takes place at the menstrual time and then is menorrhagic in character. In these cases the menstrual flow is decidedly more profuse than usual, lasts longer and terminates with a yellowish, bloody discharge. The same thing happens during subsequent periods and so on until the patient begins to worry. A bloody discharge may alternate with a reddish, rusty discharge, which may be fetid or not.

If cancer of the body is associated with a fibroid, which is quite frequent, the bleeding will no longer be typical of cancer, but rather of fibroid. It will be quite abundant and often accompanied with chunks of coagulated blood.

The absolute diagnosis of cancer of the body of the uterus is made only by examining microscopically the products of curettage. If this examination is positive, all well and good: if it is negative, it does not necessarily follow that cancer is not present, as could be shown by many examples.

#### MENOPAUSE AND HEMORRHAGE

Too often we find patients with advanced cancer of the uterus, who, when asked why they did not consult sooner, in spite of their hemorrhages will give the same stereotyped answer: "I thought it was the change of life." They came too late because some friend, some neighbor, some midwife, the grocer, or even a doctor, told them these hemorrhages were due to the change of life. They have missed the opportune time for cure, not because of some wrong diagnosis, but because of wrong information, that which ascribes to a normal process, the menopause, what is in reality the symptom of the most deadly disease, cancer of the uterus. As hemorrhages at the time of menopause have always been considered by the laity as a natural consequence of the change of

life, let us look into the physiological process of menopause a little more fully. What do we call menopause? It is the period of life in which the woman ceases to menstruate. The passage of the active genital life into menopause does not take place suddenly, but gradually. This change of life runs a little over an average of one year. During this time menstruation becomes less and less frequent, and less and less abundant, and gradually stops. Just like a small fire, it gradually dies out, without struggle, without flaring up.

From this we can see that hemorrhages at the time of normal menopause do not exist. Every hemorrhage, may it be menorrhagic or metorrhagic, is the result of a pathological process. This cannot be emphasized enough. When we meet such cases in our practice, it is our duty to find out by every means at our disposal what disease we have to deal with instead of contenting ourselves with a diagnosis which is not scientific, which is dangerous, and furthermore, which is wrong, namely, that bleeding is due to the change of life.

#### OPERABILITY

Operability of cancer of the uterus, especially of the cervix, is determined by the degree of extension of the cancerous growth into the neighboring organs. The extension of the cancer into the vaginal walls and into the parametrium gives the uterus a certain amount of fixation and the operability will be judged by the amount of that fixation. If the parametrium is heavily involved and the uterus more or less blocked into a solid mass, especially if the bladder and rectum are involved, then the cancer will have to be considered as inoperable. Yet, there are cases which at first seem inoperable, when the cancerous growth has been curetted out, show that operation is still feasible. Even the involvement of the regional lymphnodes is not an absolute contraindication to operation.

When, however, one has come to the conclusion that cancer is inoperable, then palliative measures such as radium, Percy cautery, etc., may be resorted to as they often afford a good deal of relief especially so far as pain is concerned.

It is always a mistake to perform a hysterectomy on a patient with an inoperable cancer as the only thing gained will be disrepute for the surgical procedure. This will frighten away many timid patients, who otherwise would have been cured, had they not been prevented from seeking surgical relief by the failures in inoperable cases.

Cancer of the body of the uterus is usually a better surgical risk than cancer of the cervix as it rarely involves the vagina, the parametrium, or the regional lymphnodes. This means that the operation is easier and accompanied by a lower mortality.

## OHIO PUBLIC HEALTH NOTES

In a campaign to secure funds for its work in 1920 the Toledo District Nursing Association used a map showing the number of persons suffering from tuberculosis and the location of the cases in the district. During the first eleven months of 1919 association nurses cared for 1,022 tuberculous patients, at an expenditure of \$3,054.98 for milk alone. The association recommends as a help in checking the disease in Toledo that better housing conditions be enforced, prompt reporting of cases to the health department, and a thorough physical examination of every school pupil and worker in the city.

—Dr. J. W. Young of Bellefontaine has been appointed coroner for Loagn County to fill the vacancy created by the resignation of Dr. H. A. Skidmore who recently moved from the county. Dr. Young formerly served two terms as coroner.

—As a result of the finding of colon bacilli in Norwalk city water by State Department of Health chemists, the city has been ordered to submit plans for a new filtration plant by July 1, 1920, and to have the plant constructed not later than January 1, 1922. A chlorination plant has been installed at the present plant as an emergency measure.

—Health Commissioner Waggoner and the Commerce Club joined in asking Toledo manufacturers to have their employes vaccinated in an effort to protect the city from smallpox infection from nearby communities suffering from epidemics of the disease in December.

—Cleveland's "Swat the Fly" campaign in 1920 will eclipse all previous drives, according to Health Officer Rockwood. Aid of women's clubs, schools and private agencies will be enlisted in an extensive educational campaign on the fly as a disease carrier, special emphasis being placed on the intimate relation of the common house fly and transmission of children's diseases.

—Enactment and strict enforcement of laws requiring muzzling of dogs was urged by the Cincinnati health department in late December when the prevalence of mad dogs in the city assumed epidemic proportions. Six animals reported to have bitten people were found by Dr. P. H. Dorger, city bacteriologist, to be suffering from rabies.

—Not a single case of quarantine existed in Washington C. H. during the last four months of 1919—a record unequalled for many years. In the first eight months, however, nearly 150

cases of smallpox and 36 cases of scarlet fever were quarantined.

—Statistics compiled by the coroner of Jefferson county show that there were 150 deaths due to violence or unnatural causes in that county in 1919. Coal mines led in fatalities with a total of 35; railroads came second with a toll of 17 persons killed as a result of train accidents and trespassing; automobiles claimed eight lives, mills and factories six, and electric railways one.

—A "longer life" campaign, having as its object the teaching of the importance of strict attention to safeguarding health, will be launched in Toledo in the near future, under the auspices of the city health department.

—During 1919 the Narcotic Bureau of the Cleveland Health Department helped 400 persons rid themselves of the drug habit. The department is now treating an average of 30 cases a day, a slight decrease from the number treated last year.

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### Quacks and Nostrums Rapped

About 2,100 babies were cared for in Akron infant welfare clinics during 1919, according to Health Officer C. T. Nesbitt. The work was largely of an instructional nature, pre-natal work and advice to mothers after the birth of the child being chiefly undertaken.

"In our instruction work," says Dr. Nesbitt, "we made it a rule to advise particularly against the services of mid-wives in birth. Quack doctors who infest various neighborhoods were also held up as persons to be avoided, and reliable physicians recommended. In many districts of the city, patent herb dispensers with cures for all ailments do considerable harm, and instructions against patronizing such individuals was part of our curriculum."

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### HISTORY OF BASE HOSPITAL NO. 31

Well illustrated and with complete statistical data, the official history of Youngstown Base Hospital No. 31 has made its appearance in book form. The work was compiled and edited under the direction of Major John L. Washburn, commanding officer, and contains the most minute details of the movements and activities of the unit from the time it was recruited until discharged. The history was prepared to meet the requirements of the office of the chief surgeon of the American Expeditionary Forces, but later it was decided to add additional details of the movements of the unit and publish copies for members of the unit. A valuable feature is a roster containing the personnel, both permanent and attached, with the address of each member.



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## Death of Dr. Christian R. Holmes Marks Passing of Beloved Figure in Ohio's Medical Life

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After a career of indefatigable activity in his chosen profession, culminating with a service of nearly a year and a half in the army cantonment at Camp Sherman, Major Christian R. Holmes, one of the outstanding figures in the medical history of Ohio, died at Post Graduate Hospital in New York City January 9.

His strenuous work during the war is said to have contributed largely to the breakdown which produced his illness.

Four months before his death Dr. Holmes entered the hospital for rest and observation and to recuperate from a lowered physical condition which had resulted from strenuous military service. A month later an operation for appendicitis became necessary. His condition was not favorable for recovery and subsequent development of complications hastened the end.

Dr. Christian R. Holmes was born in Veile, Denmark, October 18, 1857, the son of Christian R. Holmes and Karen Mickelson Holmes. His early education was obtained in Denmark and partly in Germany in civil engineering, the career his parents had chosen for him. At the death of his father, when the son was still in his teens, however, he came to Cincinnati, and determined to study medicine.

With rare perseverance, Dr. Holmes, under adverse circumstances, worked his way through college by teaching mechanical drawing at the Ohio Mechanics' Institute and graduated from Miami Medical College in 1886. Immediately after his graduation he entered upon an internship at the City Hospital, at the expiration of which he entered private practice and soon after became associated with Dr. Joseph Aub. He became a member of the City Hospital staff and professor of ophthalmology at Miami College and Laura Memorial and Presbyterian Hospital in 1892.

At this time Dr. Holmes was imbued with the ambition to build for Cincinnati a hospital worthy of the city as a medical center, and to consolidate the factions of the Ohio and Miami Medical Colleges.

Ten years' arduous effort was spent in visiting the capitols of Europe to collect data to assist in planning the Cincinnati hospital. The Virchow Hospital in Berlin, the Allgemeiner Krankenhaus in Vienna, the Charite in Paris, Bellevue Hospital and Mt. Sinai in New York, and the Eppendorfer Krankenhaus in Hamburg, all contributed their salient advantages, and as a result Cincinnati General Hospital has attracted international attention

and future generations will thank Dr. Holmes, who gave the best years of his life to make it what it is, a monument to the medical profession of that city.

To bring about the merger of the two medical colleges was another difficult task, but through Dr. Holmes' tact and diplomacy this was effected in 1909, when the two colleges became an integral part of the Cincinnati University. Seeing the need of a new medical college building to house the increasing student body attracted to the new hospital, Dr. Holmes personally raised among friends the funds required for the erection of such a building on the hospital site.

Having accomplished so much, the assurance had to be secured that the General Hospital and the Medical College would maintain their integrity as institutions of learning free from political interference. To effect this, Dr. Holmes helped to frame the city charter which made the medical department of the hospital a part of the university, whose trustees have the sole right to elect the staff and supervise the nursing department.

Dr. Holmes was commissioned in the Medical Officers Reserve Corps in 1917, with the rank of Major, and was placed in charge of the eye, ear, nose and throat department at the Base Hospital in Camp Sherman. He was named second in command of the hospital early in 1918 and served in that capacity during the administration of Major E. C. Huber and Major C. R. McKnight. As assistant commandant he supervised and directed much of the construction work of the new hospital. He left the service in March, 1919.

Many honors came to Dr. Holmes from his colleagues. He was dean of the Ohio-Miami Medical College to the day of his death, and permanent chairman of the Cincinnati Hospital Commission. Other honors were: Professor of Otolaryngology of the Medical Department of the University of Cincinnati; President, American Academy Ophthalmology and Oto-Laryngology, 1908-1909; member of American Ophthalmological Society, Cincinnati Academy of Medicine, the Ohio Ohio State and American Medical Associations. His contributions to medical literature and the correlated sciences were voluminous.

Dr. Holmes is survived by his widow and three sons. "He was an idealist, an enthusiast. He sought to do things for humanity, and he succeeded where others would have failed. His passing is a distinct loss to the community and the medical profession," said a colleague.

## DEATHS IN OHIO

*William B. Van Note, M. D.*, Medical College of Ohio, 1895; aged 53; member of the Ohio State Medical Association; Fellow of the American Medical Association; died in Miami, Florida, December 20, after a brief illness from pneumonia. As was their custom, Dr. and Mrs. Van Note were spending the winter months in Florida, where he practiced the eye, ear, nose and throat specialty among winter colonists. He was a native of Allen County and except for periods of post-graduate work in London, Vienna and Berlin and winter months in Florida, had spent his entire medical career in Lima. As Councilor for the Third District of the Association from May, 1916, to January, 1919, Dr. Van Note rendered valuable service, bringing his district to a high state of organization efficiency. In 1916 he also served as a member of the State Association's Committee on Auditing and Appropriations. Funeral services for Dr. Van Note were held in Florida. He is survived by his widow.

*John Willcheur Barnes, M. D.*, Cincinnati College of Medicine and Surgery, 1889; aged 56; died at his home in Columbus, January 1, from diphtheria. Dr. Barnes was a resident of Columbus for 25 years, moving to that city from Chillicothe. He leaves a widow and one daughter.

*Alexander H. Korner, M. D.*, University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1886; aged 61; member of the Ohio State Medical Association; died in a Columbus hospital, December 31, from paralysis. Dr. Korner's home was in Woodsfield, where he practiced for many years. He held numerous offices in the Monroe County Medical Society and at the time of his death was president of the organization, although he had not presided for some time because of ill health.

*A. M. Clark, M. D.*, University of Pennsylvania School of Medicine, Philadelphia, 1880; aged 62; former member of The Ohio State Medical Association; died at his home in Youngstown, December 22. Dr. Clark had been failing in health for over a year. He had been in active practice in Youngstown since 1881. Surviving are one son and one daughter.

*John Cope, M. D.*, American Eclectic Medical College, 1882; aged 70; died at his home in Negley, Columbiana County, December 23, from skull fractures received when he was thrown from his carriage by a spirited horse. Dr. Cope was a pioneer resident of the community in which he lived. Two sons survive.

*Benjamin Davis, M. D.*, Medical College of Indiana, Indianapolis, 1879; aged 73; died at the home of his daughter in Osborn, December 23, from heart trouble. For the past 40 years Dr.

Davis had practiced in New Carlisle. He served for eight years as pension examiner of Clark County, and at the time of his death was president of the county health board. He leaves one daughter and one son, Dr. William Davis of Bainbridge.

*Paul Gillespie, M. D.*, Miami Medical College, Cincinnati, 1897; aged 49; member of The Ohio State Medical Association and Fellow of the American Medical Association; died in Christ Hospital, Cincinnati, December 15, from injuries received when the machine he was driving was struck by a passenger train at Hartwell. Dr. Gillespie's home was in Wyoming, where he had practiced for a period of 20 years. During the war he served as a member of the county draft board. He was also a member of the recently organized county board of health, and surgeon for the Cincinnati, Hamilton and Dayton Railroad. His widow and one son survive.

*Daniel Eli Haag, M. D.*, Cincinnati College of Medicine and Surgery, 1880, aged 84; died at his home in Liberty Center, December 13, after five days' illness with heart disease. Dr. Haag was the oldest practicing physician in Henry County, having actively engaged in practice for 61 years. For many years he served as professor of materia medica and therapeutics and dean of the faculty of Toledo Medical College, and president of the board of trustees of Robinwood Hospital, Toledo. He leaves his wife, two daughters and one son, Dr. Harry P. Haag of Liberty Center.

*Jerome A. Heath, M. D.*, Cleveland College of Physicians and Surgeons, 1884; aged 60; former member of The Ohio State Medical Association; died at his home in Cleveland, December 10. Dr. Heath was a practitioner in Cleveland for more than 30 years and was one of the founders of St. Clair Hospital. Surviving are his widow and one daughter.

*Warren Cushman Hewitt, M. D.*, Cleveland University of Medicine and Surgery, 1888; aged 54; member of The Ohio State Medical Association; died at the Ohio Soldiers' and Sailors' Orphans' Home, Xenia, December 18, from heart disease and complications. Dr. Hewitt had been resident physician at the home since 1902, when he succeeded Dr. A. C. Messenger in that capacity. During last winter's influenza epidemic, when nearly 700 children and employees at the institution were ill, Dr. Hewitt worked unceasingly and his recent illness is attributed to overwork at that time, when in spite of the great amount of sickness but three deaths occurred. Four sisters survive.

*James L. Holden, M. D.*, Medical College of Ohio, 1882; aged 62; died at his home in Zanesville December 22, from complications. His widow and one daughter survive.

*O. M. Norman, M. D.*, Cincinnati College of Medicine and Surgery, 1873; aged 88; member of The Ohio State Medical Association; died at his home in Roseville, December 15. Dr. Norman



was formerly mayor of Roseville and at the time of his death was justice of the peace, health officer and physician for the Pennsylvania Railway Company. He leaves two sons.

*C. R. Rosendale, M. D.*, Eclectic Medical College, Cincinnati 1856; aged 88; died at his home in Bowling Green, December 15, from Bright's disease. Dr. Rosendale was a native of England but came to this country at the age of nine. Following his graduation he began practice in West Millgrove and continued until 1901. He leaves one daughter and four sons, one whom is Dr. T. T. Rosendale of Fostoria.

*Frank A. Stove, M. D.*, Ohio Medical University, Columbus, 1904; aged 46; member of The Ohio State Medical Association and Fellow of The American Medical Association; died at his home in Bowling Green, December 18, from carcinoma. Soon after the severance of American diplomatic relations with Germany, Dr. Stove en-

listed in the Medical Reserve Corps. He entered active service in April, 1918, serving at embarkation and debarkation hospitals in the East. During his services the disease which caused his death developed, and he received treatment at General Hospital No. 1, New York City, and Walter Reed Hospital, Washington. His widow, father and one brother survive.

#### MARRIAGES IN OHIO

Dr. David P. Philips, Jr., of Kenton, and Miss Edna M. Purtell, of Madison, Wisconsin, at Hampton, Virginia, December 9. Dr. Philips was honorably discharged from military duty January 1.

Dr. William H. Matchett and Miss Nellie Turner, both of Greenville, at Covington, Kentucky, December 22.

Dr. Fowler Burdette Roberts of Akron and Miss Marie dePaul of Chicago, recently.

## Accurate Data on Ohio's Hospital and Dispensary Facilities is Now Being Compiled by New Bureau of Hospitals

Accurate information on Ohio hospital facilities will soon be made available for the first time through annual reports for the year 1919 which are being forwarded to the State Department of Health by the hospitals. Blank forms for the reports were mailed to hospitals in December, in accordance with provisions of the Kryder Act.

The Kryder Act, among other provisions, repeals the statutory definition of a maternity hospital, authorizes the state commissioner of health to define and classify hospitals and dispensaries, and requires these institutions, both public and private, to register with and report annually to the State Department of Health. Maternity hospitals may be licensed by the commissioner of health upon the approval of the local health authorities and inspection by representatives of the State Department as heretofore. The Bureau of Hospitals in the State Department was created to discharge the provisions of these legislative measures.

Registration of hospitals and dispensaries was undertaken as the first logical step in the work of the Bureau. Up to January 1, 290 hospitals appeared on the Bureau records, 237 of which are registered. These 237 contain 96% of the hospital bed capacity on record. An unknown number of small institutions are not yet on record.

No serious attempt has been made to compile a mailing list of dispensaries. However, 59 dispensaries were discovered in compiling the hospital list, and 48 of these had registered by the early part of January.

In order to place hospitals of the state in touch with plans and general program under the recent legislation, a meeting of hospital executives representing the various types of hospitals and hospital interests in the state was held in December. Dr. A. R. Warner, Secretary of the Ameri-

can Hospital Association, and Senator Howell Wright, Secretary of the Cleveland Hospital Council, spoke at this meeting, urging the hospitals to cooperate to the fullest extent in carrying out the provisions of the Kryder Act.

A hospital advisory committee of three members, including Dr. A. R. Warner, Dr. A. C. Bachmeyer, superintendent of Cincinnati General Hospital, and Dr. M. H. Cherrington of Logan, has been appointed to actively cooperate with the Bureau of Hospitals, and this committee assisted in compiling the uniform report blank which is being used by the hospitals in summarizing their work during 1919.

The information required in the blank is very comprehensive, including in addition to detailed financial reports and incorporation data, a census of patients by sex; increases or decreases in bed capacity; classification of patients under the divisions general medical, surgical, maternity, living births, contagious, venereal, tuberculosis and mentally nervous; and assignment of beds for certain specified purposes, as tuberculosis, maternity, venereal diseases, contagious, drug addiction. Considerable space is devoted to queries on the organization of the staff, laboratory facilities and record keeping.

#### Plan New Physicians' Building

The Association Building Company, understood to be composed of Drs. George W. Crile, William E. Lower and Frank E. Bunts, has leased property in Cleveland with the expectation of erecting thereon a \$400,000 building for surgical and clinical purposes. Tentative plans for the structure provide that it shall be of four stories and contain 60 offices for physicians in addition to a library, laboratories and other accessories.

# MEDICAL COMMENT ❧ ❧ ABSTRACTS AND CURRENT TOPICS OF INTEREST

**T**HE PUBLICATION COMMITTEE IS MORE THAN ANXIOUS TO MEET THE NEEDS OF THE JOURNAL'S READERS. IN CONSEQUENCE THE MEDICAL EDITOR IS INITIATING A NEW DEPARTMENT TO BE DEVOTED TO MEDICAL COMMENT, ABSTRACTS, AND CURRENT TOPICS OF INTEREST TO THE GENERAL PRACTITIONER. THE EDITORIAL POLICY OF THIS NEW DEPARTMENT WILL BE ONE OF SERVICE AND SUGGESTIONS AND CONTRIBUTIONS WILL BE GRATEFULLY RECEIVED.—MCM.

## Tumors of the Breast.

**I**N MANY CONDITIONS that require surgical treatment a rather definite policy has been worked out. The treatment of acute appendicitis, of gallstones, of gangrene, of wounds of the intestines, and many other conditions is along generally well recognized lines with which physicians and surgeons are mostly in accord. The question of tumors of the breast, however, is one about which there seems to be many divergent opinions. Some surgeons take a rather arbitrary stand and say that every woman with a lump in the breast should be submitted to the radical operation for cancer. On the other hand, there is the other extreme in which the radical operation is only done when symptoms and signs of cancer are entirely obvious. Both extremes are illogical, and from neither policy can a series of patients hope to receive the greatest benefit. The chief function of scientific medicine is to work out the diagnosis, and if every woman with a lump in the breast were subjected to radical operation for cancer, much unnecessary mutilation would be done. It would also make patients hesitate to consult a physician or surgeon, whereas the way to lower the death rate from cancer is to encourage the woman to seek a doctor's opinion. But it must always be remembered that if a growth is malignant, the earlier a radical operation is done, the greater are the chances of a permanent cure.

**E**VERY lump in the breast should be taken seriously until the diagnosis is established beyond a reasonable doubt. Cachexia, pain, ulceration, enlarged glands in the axilla, and retraction of the nipple are late and often terminal stages of cancer. No one is justified in watching a lump in the breast until such symptoms or signs appear. Unfortunately, there is nothing pathognomonic about cancer of the breast, but as a rule it comes in women over 35, as a single lump, and without pain. There is a limitation of motion, though in the early stages this does not often seem very apparent, especially in women with relaxed mammary glands. These symptoms appear in more than 80 percent of cancers of the breast. The rest are exceptions and here the cancer may be painful in the early stages, or may involve a lobe of the breast something like a local mastitis.

Fortunately, these are rare. Then, too, a cancer developing in a benign tumor may be very difficult to diagnose. The benign tumor may have existed for a number of years and then take on considerable growth. In such a case we have confusing symptoms of a distinctly benign tumor with superimposed malignancy, such as sometimes comes when a cancer of the stomach develops on an old benign ulcer.

The vital thing in the treatment of any growth of the breast is *not to rub or massage the breast as long as there can be a suspicion of malignancy*. It is not at all infrequent for the surgeon to find cancer of the breast in which the metastases have been more rapid than could be accounted for by the histological appearance of the tumor. Inquiry often brings forth the information that the patient has been rubbing the breast with some ointment or even sometimes the doctor may prescribe massage.

(J. SHELTON HORSLEY, M. D.)

## New Books

*Hygiene and Sanitation*, by Seneca Egbert, A. M., M. D., Professor of Hygiene, University of Pennsylvania, formerly professor of Hygiene, and Dean of the Medico-Chirurgical College; sometime Major Medical Corps, U. S. Army; Seventh Edition, enlarged and thoroughly revised. Illustrated with 160 engravings and 5 plates. Price \$3.00. Lea and Febiger, Philadelphia and New York.

*Rational Therapy*, by Otto Lerch, A. M. Ph. D., M.D., Professor of Medical Diagnosis and Treatment. Tulane University of Louisiana, Post-Graduate Department. The Southworth Company, Troy, N. Y. Publishers.

*Atlas of Operative Gynaecology*, by Barton Cooke Hirst, M.D., Professor of Obstetrics, University of Pennsylvania. 164 pages, 46 figures. Published by J. B. Lippincott Company, Philadelphia and London.

*Experimental Pharmacology*, by Hugh McGuigan, Ph. D., M. D., Professor of Pharmacology in the University of Illinois, College of Medicine. Illustrated with 56 engravings and 7 colored plates. Price \$2.75. Lea and Febiger, Philadelphia and New York.



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Dr. Richard Dexter  
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**THE REGISTRAR**

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## Provision for Special Health Insurance Committee; Annual Meeting Plans and Budget Matters Occupy Council's January Meet

### MINUTES

Council of the Ohio State Medical Association met Sunday, January 4, at the Deshler Hotel, Columbus. Members present: President J. F. Baldwin, President-elect Charles Lukens, Ex-president E. O. Smith, Treasurer H. M. Platter, Councilors Carothers, Hunter, Keller, Updegraff, March, McClellan, Headley and Rardin. Executive Secretary Martin, and by special invitation, the following section officers: G. F. Zinninger and R. A. Ramsey, chairman and secretary of the Section on Medicine; Harry Noble and Howard Stitt, Section on Surgery; F. C. Wagenhals and R. Harvey Cook, section on Nervous and Mental Diseases, and J. R. McDowell, secretary of the Section on Hygiene and Sanitary Science. Dr. Keller represented the Section on G. U. Surgery.

Dr. Keller, general chairman of the committee on arrangements for the annual meeting, representing Council, reported the appointment of local committees on reception, entertainment, badges, exhibits, and projecting apparatus. On motion, duly carried, Council authorized Dr. Keller, after conference with the chairman of his local committees, to determine the dates for the meeting in the first or second week of June, the periods from June 1 to 3, or June 8 to 10, inclusive, being recommended.

The executive secretary was instructed to notify the section officers of the exact dates as soon as they were determined in order that the definite programs for each section might be completed as early as possible.

Dr. Noble, chairman of the Section on Surgery reported that his program was practically completed, with ten essayists.

Dr. Ramsey, secretary of the Medical Section, reported that on account of the date for the meeting not being definitely fixed, he had not made much progress, but that his program could be completed in a short time after the selection of the date.

Dr. Wagenhals, chairman of the Section on Nervous and Mental Diseases, reported that no definite program was yet ready. He asked the consent of Council to invite speakers from outside the state. Dr. Smith explained that it was the usual custom of sections to invite one speaker from another state, providing, of course, that the section bear all expenses of the visiting speaker.

Dr. Keller, secretary of the G. U. Section, reported that the program was practically complete. In addition, they have secured Dr. Hugh Cabot, as orator for the general session, who will speak on the subject of "Non-tubercular Infection of the Kidney." Dr. Cabot will also be the guest of the section.

Dr. McDowell, secretary of the Section on Hy-

giene and Sanitary Science, stated that the action of the present legislature in modifying the public health code had changed all plans made for the program for their section. He stated, however, that a program would be arranged promptly, and forwarded to the executive secretary.

Dr. Morgan, secretary of the Section on Obstetrics and Pediatrics, reported by letter that his section was planning seven or eight papers on obstetrics, and an equal number on pediatrics, and that the completed program would be submitted as soon as the announcement of the definite dates had been made.

Dr. Ingersoll, chairman of the section on Eye, Ear, Nose and Throat, reported by letter that he and Dr. Alderdyce, the secretary of the section, were at work on the program and that among the distinguished speakers already secured was Dr. Kerrison, of New York.

The executive secretary presented a detailed report of membership, showing a total paid membership to date, of 2684 members for 1920. While this number is substantially over half the total membership estimated for the present year, the secretary was instructed to urge the secretaries and treasurers of the local societies to complete collections of dues as early as possible so that members might be placed in good standing immediately and prevent lapsing of medical defense and other benefits.

Dr. McClellan presented the following report and recommendations of the Committee on Auditing and Appropriations, outlining the budget for the year 1920:

Journal .....	\$8,000.00
Treasury, salary .....	300.00
Executive Secretary, salary.....	4,000.00
Executive Secretary, expense.....	400.00
President, expense .....	100.00
Councilor, expense .....	400.00
Annual meeting, expense.....	400.00
Auditing and appropriation.....	150.00
Medical education .....	250.00
Medical defense .....	3,000.00
Stationery and supplies.....	600.00
Postage and telegraph.....	900.00

Dr. Rardin moved that the report be approved tentatively until the meeting of the House of Delegates, which has the assignment of funds, and that the secretary of the Association be directed to notify the chairman of the committee, and all others who have the authorization of funds, giving them copies of the appropriation, that they may confine their expenses to the appropriation. Seconded by Dr. Carothers, and carried unanimously.

The executive secretary outlined in detail the developments in the problem of proposed compul-



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sory state health insurance, and submitted recommendation made by Dr. Selby for the appointment of a committee to survey the situation in Ohio, and to confer with the committee on Public Policy and Legislation, in submitting definite recommendations to Council on the modification of the present policy or the adoption of a new policy.

After a general discussion, Dr. Carothers moved that the president be authorized to appoint a committee of seven, to act on the matter as outlined by the executive secretary, jointly with the state committee on Public Policy and Legislation, and of which new committee, Dr. Upham, the chairman of the latter committee, should be ex-officio, the head, and that the work of this committee should include the formulation of definite recommendations to council at its next meeting in April. The motion, seconded by Dr. Rardin, was unanimously carried.

Pursuant to the adoption of the motion, President Baldwin appointed the following committee: J. H. J. Upham, Chairman, Columbus; C. D. Selby, Toledo; Otto P. Geier, Cincinnati; W. H. Snyder, Toledo; C. H. Wells, Columbus; W. B. Chamberlin, Cleveland; J. C. M. Floyd, Steubenville.

The executive secretary reported in detail on the legislative situation including the modifying of the Hughes Public Health Act, the situation on occupational disease bills, and other pending legislation. Attention was called to the preliminary report of the joint legislative committee on administrative reorganization, as it affects medical practice, analysis of which was made on page 31 of the January Journal. These matters were left entirely in the hands of the committee on Public Policy and Legislation for action and recommendations to council.

A report on medical defense submitted by the executive secretary indicated an increase in the number of malpractice suits filed and threatened during the past several months. The history of these cases showed that a number of defendants are still failing to comply with the requirements for X-ray in fracture cases.

Dr. Keller called attention to the fact that Dr. Willard J. Stone, of Toledo, a member of the Committee on Medical Defense, had moved out of the state and suggested that an appointment be made to fill his unexpired term. On motion by Dr. Keller, duly seconded, Dr. Walter H. Snyder of Toledo, was appointed to fill the unexpired term of Dr. Stone.

The president read the resignation of Dr. E. S. Protzman of Kenton, as councilor of the Third District. The resignation was accepted with regret.

On motion of Dr. Hunter, based on a request from the Clark County Medical Society, Dr. Isaac Kay of Springfield, aged 91, retired, was accorded honorary life membership in the Ohio State Medical Association.

On motion of Dr. Platter, seconded by Dr. Carothers, the executive secretary was instructed

to accept 1920 dues from members still in military service, at the rate of \$2.00 per year.

On motion duly seconded, Council adjourned at 4.30 to meet Sunday, April 4, at 1:30 P. M. at the Deshler Hotel, Columbus.

#### "Big Four" Make Good Health Records in 1919

Without exception the big cities of Ohio were in excellent health during the year just passed. Statistics prepared by local healthers show that all had death rates considerably lower than those experienced in 1918, when influenza swelled the totals, and a number reduced figures set in previous healthy years.

Cleveland had the healthiest year in the city's history and Health Commissioner Rockwood attributes the fact to six causes: 1. The influenza epidemic in 1918 carried off many of lower vitality who otherwise would have died in 1919. 2. Decrease in immigration. 3. Prohibition. 4. Employment for all, with the result that many were better fed and clothed than ever before. 5. Physicians and nurses returned from military service provided better care for contagious cases. 6. Organized effort to prevent accidents.

Mortalities dropped from 13,000 in 1918 to 11,000 in 1919, a reduction in death rate from 16 to 14 in 1,000. Diphtheria is practically the only disease on the increase in Cleveland, the 1919 total exceeding 2,000 cases as against 1,371 during the previous year. Scarlet fever, smallpox and infantile paralysis showed gratifying decreases.

In Cincinnati the total number of deaths during 1919 was placed at 6,402, a rate of 15.5 per thousand population, the lowest since 1915. The death rates in 1918, 1917 and 1916 were 20.94, 16.49, and 16.42, respectively. A marked falling off in the number of births reported during the year was evident in a reduction from 8,030 in 1918 to 7,055 in 1919.

With a death rate of 14.2 per 1,000 Columbus established a new record in health. Total deaths for the year were 3,298, as compared with 4,262 in 1918, a decrease of nearly a thousand. There were 92 less deaths in 1919 than in 1917, which was a normal year. The city surpassed its already enviable typhoid record by recording only seven deaths from this disease in 1919, and all but one of these were non-resident in origin, being persons brought to the city for hospital treatment. Of the 231 deaths from influenza, 200 occurred during the first four months of the year, when the epidemic was still prevalent.

Toledo's death rate is getting back to normal, figures for the year showing a decrease of approximately 400 deaths from the total recorded in 1918. With the exception of diphtheria, which showed a slight decrease, mortalities from the so-called children's diseases, measles, scarlet fever and whooping cough, increased. Typhoid deaths dropped from 27 in 1918 to 10 in 1919.



# Influenza

## Prevention and Treatment

**Mixed bacterial vaccines** for the prevention and treatment of common colds and influenza were first produced commercially in the United States by the Mulford Laboratories, in 1910. Since its introduction, the formula of **Mulford Influenza Serobacterin Mixed** has been maintained unchanged.

During the influenza epidemic of 1918, additional strains obtained from virulent cases in different parts of the country were added. These strains include:

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Pneumococcus (types I, II, III, IV).  
Micrococcus catarrhalis.  
Bacillus Friedlander.

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#### HEARINGS

Dr. Albert B. Frazee of Toledo appeared before the State Medical Board at its meeting on January 6 in answer to a citation for explanation of his advertising practices. Dr. Frazee assured the board of his desire to adhere to the Medical Practice Act and the laws regarding advertising and fee splitting, and his case was continued pending good behavior.

The revocation case of Dr. H. A. Vickers of Youngstown which was continued at a previous meeting, was again brought to the attention of the board at the January meeting. Appearing in his own behalf, Dr. Vickers stated that he had entirely severed his connection with the "Ohio Doctors" and would henceforth comply with the statutes. His case was continued pending strict observance of the Medical Practice Act.

Heber M. Dill, Osteopath, Lebanon, appeared before the board in answer to charges concerning the use of drugs in the practice of osteopathy. Dr. Dill promised to adhere strictly to the terms of his osteopathic certificate.

#### CERTIFICATES AWARDED

Twenty-six of thirty-four candidates for certificates successfully passed the December examina-

tion conducted by the board and were awarded certificates to practice at the meeting of January 6. They are:

*Warren C. Fargo*, Warsaw, New York, graduate of Buffalo University College of Medicine.

*Herman C. Clayton*, Quincy, Ohio, graduate of Chicago College of Medicine and Surgery.

*Ford C. Ganyard*, Brunswick, Ohio, graduate of Loyola University, College of Medicine, Chicago, Illinois.

*John Slivka*, Cleveland, Ohio, graduate of Chicago College of Medicine and Surgery.

*John C. Thompson*, Decatur, Illinois, graduate of Chicago College of Medicine and Surgery.

*Wilbur C. Medill*, Follansbee, West Virginia, graduate of Columbia University College of Physicians and Surgeons.

*Thomas H. Copeland*, Athens, Ohio, graduate of Jefferson Medical College, Philadelphia.

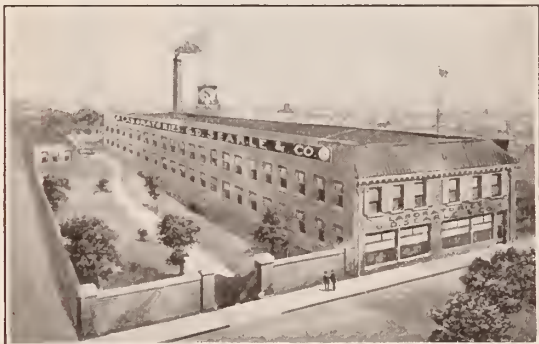
*Henry R. Gozdicki*, Youngstown, Ohio, graduate of Jefferson Medical College, Philadelphia.

*Donald A. Gross*, Youngstown, Ohio, graduate of Jefferson Medical College, Philadelphia.

*Julius C. Speck*, Youngstown, Ohio, graduate of Jefferson Medical College, Philadelphia.

*William A. Welsh*, Youngstown, Ohio, graduate of Jefferson Medical College, Philadelphia.

*Harry L. Griffith*, Columbus, Ohio, graduate Johns Hopkins Medical College.



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*Blaine R. Goldsberry*, Albany, Ohio, graduate of Johns Hopkins Medical College.

*Robert A. Webb*, Cincinnati, Ohio, graduate of Johns Hopkins Medical College.

*Joseph Webb*, Springfield, Ohio, graduate of Johns Hopkins Medical College.

*Wallace E. Prugh*, Pittsburgh, Pennsylvania, graduate of Hahnemann Medical College, Philadelphia.

*Festus A. Johnson*, Rossiter, Pennsylvania, graduate of McGill University, College of Medicine, Montreal Quebec.

*Himey E. Levi*, Columbus, Ohio, graduate of Ohio State University, College of Medicine.

*Charles E. H. Upham*, Columbus, Ohio, graduate of University of Pennsylvania College of Medicine, Philadelphia.

*Albert J. Michels*, East Liverpool, Ohio, graduate of University of Pittsburgh College of Medicine.

*William P. Brown*, Mt. Vernon, Ohio, graduate of Syracuse University College of Medicine, Syracuse, New York.

*William H. Rice*, Osborn, Ohio, graduate of University of Vermont College of Medicine, Burlington, Vermont.

*Arthur B. Raffl*, Cleveland, Ohio, graduate of Washington University College of Medicine, St. Louis, Missouri.

*Earl DeWitt Foltz*, Cleveland, Ohio, graduate of Western Reserve University School of Medicine, Cleveland.

*Auguste Rhu*, Marion, Ohio, graduate of Western Reserve University College of Medicine, Cleveland.

*Frank W. Stevenson*, Cincinnati, Ohio, graduate of Rush Medical College, Chicago.

*Joseph F. Nagle*, Youngstown, Ohio, graduate of Georgetown University Medical School, Washington, D. C.

#### RECIPROCITY

At the January meeting of the board, reciprocity certificates were granted to 23 physicians. The new licentiates, with their schools of graduation and intended Ohio locations, are:

*William Calvert Barnard*, graduate University of Louisville Medical College 1911; intended residence, *Cleveland*.

*Christian John Biedenkopf*, graduate Rush Medical College 1903; intended residence, *Chillicothe*.

*Samuel Isadore Bross*, graduate University of Maryland College of Medicine 1918; intended residence, *Holloway* (Belmont County).

*Clarence J. Buckley*, graduate Medico-Chirurgical College, Philadelphia 1915; intended residence, *Akron*.

*Harold Russell Conn*, graduate Jefferson Medical College 1912; intended residence, *Akron*.

*Andrew Jackson Davidson*, graduate Univer-

## TUBERCULOSIS

In the treatment of tuberculosis the aim is to increase the patient's resistance to the infection.

CREOSOTE in the more advanced stage or in the presence of fever, and CALCIUM for use throughout, are in the opinion of Dr. S. Solis-Cohen secondary but necessary agents in the successful management of the great mass of cases of chronic pulmonary tuberculosis.

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sity Louisville College of Medicine 1909; intended residence, *Piney Fork* (Jefferson Co.)

*Georgia Adell Filley*, graduate University Illinois College of Medicine 1913; intended residence, *Toledo*.

*William Edward Gallagher*, graduate University of Maryland College of Medicine 1917; intended residence, *Akron*.

*Julius Stanley S. Gardner*, graduate University of Michigan College of Medicine 1916; intended residence, *Cleveland*.

*Ethel Regan Harrington*, graduate Rush Medical College, 1917; intended residence, *Cleveland*.

*Aloys Severin Heithaus*, graduate St. Louis University College of Medicine 1911; intended residence, *Cleveland*.

*Clarence Henry Hyman*, graduate Harvard Medical College 1916; intended residence, *Cleveland*.

*David Kaplan*, graduate Rush Medical College 1919; intended residence, *Toledo*.

*Bella Levinson*, graduate University of Pittsburgh College of Medicine 1911; intended residence, *Cleveland*.

*Robert B. Maclin* (colored), graduate Meharry Medical College, Nashville, Tennessee, 1905; intended residence, *Youngstown*.

*Sarah Pettit Roberts*, graduate of Cleveland College of Medicine and Surgery 1894; intended residence, *Columbus*.

*Samuel Louis Scibetta*, graduate of University

of Buffalo College of Medicine 1910; intended residence, *Cleveland*.

*William Walter Wilkinson*, graduate Jefferson Medical College 1915; intended residence, *Cleveland*.

*Justin J. Young*, graduate Creighton University Medical College 1915; intended residence, *Cleveland*.

*Bushead Foley Laird*, graduate Medical College of Ohio 1874; intended residence, *Youngstown*.

*William Lacland Peters*, graduate Missouri Medical College, St. Louis, 1898; intended residence, *Columbus*.

*Olie Post Dearth*, graduate Jefferson Medical College 1882; intended residence, *Akron*.

*Cornelius Hood Williams*, graduate Kentucky School of Medicine, Louisville, 1889; intended residence, *Middletown*.

Out of a total of twelve applicants for certificates to practice osteopathy, five passed the December examination and received certificates at the January meeting.

R. P. Baker of Delaware, V. W. Brinkerhoff of Toledo, and W. W. Hall of Ravenna, who had previously held licenses to practice osteopathy in Ohio, qualified to practice major surgery by passing the December examination, in accordance with the provisions of the recent amendment to the Medical Practice Act. Sixteen osteopaths attempted to qualify.

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## Activities of Division of Hygiene, State Department of Health, Indicate Comprehensive Plans for the Future

The monthly report of the Division of Hygiene of the State Department of Health, submitted by Dr. John R. McDowell, director, covering the period from December 12 to January 5, shows that this division is not a paper organization. The various branches of the division, including the bureaus of tuberculosis, child hygiene, public health nursing, venereal disease, and hospitals, worked at top speed in organizing activities under their supervision.

### TUBERCULOSIS

Among numerous other activities, the bureau of tuberculosis consulted with officials of Springfield Tuberculosis Hospital on means of enlarging the hospital. The plan decided upon was the addition of a pavilion for 50 children and a modern hospital building to accommodate 50 or 60 patients, with power plant, laundry, dining room and kitchen to accommodate at least 200 patients—the old residence building now being used as a hospital to be used for administration and laboratory purposes. A campaign toward creating sentiment favoring the erection of the proposed additions, which will give the institution a capacity of 150 to 169 beds, or double the present capacity, is contemplated for March.

### CHILD HYGIENE

During the month a survey blank was sent out by the bureau of child hygiene to local chapters of the Children's Committee of the State Welfare Society, or to a correspondent of this organization in each county in the state, requesting a survey of all the schools in the county, the idea being that if lay women could be sufficiently interested in the schools of their community to make this survey they would also be equally interested in having the defects corrected which were found. Responses received thus far have been satisfactory.

The result of a school survey conducted in Hamilton by the bureau of child hygiene has been the appointment of a school nurse for the public schools and the announcement by Parochial schools of the city that they would institute medical inspection. Also, an intelligent public opinion has been created which will demand open-air rooms for pre-tuberculous children and segregation into special classes of the feeble-minded.

Very little has been done by the department toward inspection of maternity hospitals, an activity which will be inaugurated soon, owing to the fact that the definition of a maternity hos-

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Hear Inspiring and Instructive Addresses by  
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pital and the new rules and regulations have not yet been definitely adopted.

Owing to the resignation of Dr. Frances M. Hollingshead as chief of the bureau of child hygiene, which became effective January 1, it has been necessary for the bureau of public health nursing to assume some of the activities of this bureau.

#### PUBLIC HEALTH NURSING

Two new supervising nurses, Misses Norah Abbe and Pearl Kamerer, have been added to the staff of nurses, giving the bureau five supervising nurses in addition to the chief of the bureau. These nurses have completed the work of calling on every public health nurse at work outside of the large cities, and report a gratifying willingness and desire to cooperate with the bureau on the part of the rural nurses. A plan has been arranged whereby all public health nurses working outside of large cities are grouped into eight districts, each of which will hold a conference at least once every three months. Whenever a community now secures a new nurse a representative from the bureau will be sent to the community to assist in initiating the work.

The agreement for a cooperating public health nursing organization between the Red Cross and the state department is working out satisfactorily. It is expected that the amendment of the Hughes law will result in the employment of a much larger number of Red Cross nurses than under the original law.

Lack of cooperation on the part of physicians and local authorities still handicaps prevention of blindness work carried on by the public health nursing bureau under the direction of Miss Mabel Green, according to the report, which shows that 160 cases were reported to the bureau; 10 investigations were made; 56 calls were made, and hospital care was arranged for three rural cases.

#### VENEREAL DISEASE

A great awakening of public interest was evinced in the clinics at Hamilton, Portsmouth and Warren during the month, brought about largely through the efforts of two lecturers for the bureau, who spoke in all 122 times, reaching 11,700 factories, institutions and general and special meetings. The lecturers are now engaged in addressing farmers' institute meetings throughout the state.

On the other hand, the bureau found it necessary to withdraw government and state support from venereal clinics previously established in Ashtabula and Lorain as the amount of work done by these clinics did not justify the money expended.

Considerable progress was reported during the month in the "Keep Fit" campaign being waged among boys of the high schools, industries and rural districts. It is anticipated that all of the 250,000 or more boys in these groups will be reached by this campaign by the end of the present year.

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When used early in the disease **Diphtheria Antitoxin** has reduced the mortality to about 2%. In the days before **Diphtheria Antitoxin**, the mortality was 35%.

### DIPHTHERIA TOXIN-ANTITOXIN MIXTURE

Package of 3 vials (one immunization).....	\$1.00
Package of 30 vials (ten immunizations).....	7.50
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### SCHICK TEST

Package of 10 tests; Lederle outfit.....	1.00
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1,000 Units (prophylactic dose) in syringe.....	1.00
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## HOSPITALS

The bureau of hospitals reported that 290 hospitals, with a total of 31,500 beds, 237 having 96 per cent. of the total bed capacity, have been registered, while 53 remain unregistered. Owing to lack of any common source, it has been impossible as yet to compile even an approximately complete mailing list of dispensaries upon which to base registration in compliance with the Kryder law requiring this procedure.

## Effective Work Against Venereal Diseases

Figures contained in the summary of work done by the Bureau of Venereal Diseases of the State Department of Health during the last half of 1919 show that the efforts of the department in this field are worthy of serious consideration and deserving of most careful co-operation by physicians of the state. Dr. R. G. Leland is chief of the bureau.

There were established in 20 Ohio cities, 33 clinics for the examination and treatment of venereally infected individuals. During this time 7466 patients were admitted to these clinics, and received a total of 97,552 treatments. Of the treatments rendered, 20,325 represented administration requiring 14,700 grams of arsphenamine or nearsphenamine. Blood samples to the number of 24,589 for Wassermann reactions were taken.

A considerable number of red light districts were raided and the openly tolerated commercialized prostitution suppressed. To protect the public against ignorant, irresponsible and willfully careless individuals infected with one or more venereal diseases, 950 quarantine orders were issued and served.

The educational campaign embodied lectures, conferences, lantern slide showings, card and motion picture film exhibits to all classes of people in social, educational, professional and industrial circles. The number of such lectures and showings totaled 1,051, and the number of persons reached was 142,500. An important part of the educational campaign was the distribution of literature in English and 12 foreign languages upon all phases of sex education from the educational semi-popular circular carrying information intended for persons who have had small educational opportunities to the manuals embodying the latest improved methods of diagnosis and treatment intended for the use of both general practitioner and specialist. In all 747,000 pieces of literature were distributed.

Large as these figures may seem in comparison with the venereal disease work which preceded this period it is felt that this is but a beginning and it is earnestly hoped that with the co-operation of the medical profession, the teaching and legal professions and in institutions and industries throughout the state, a more complete work can be done in the future.

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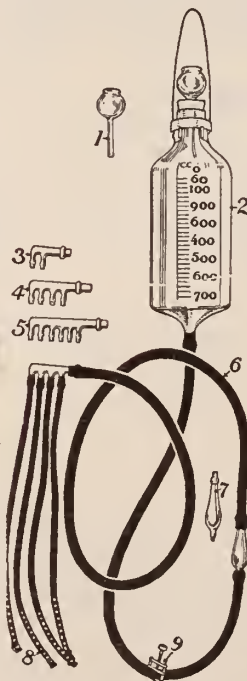
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## Fine Points of Law Determined by Attorney General Who Defines Limitations Governing Nurses Employed in Industrial Plants

Innumerable times the question has been raised as to whether or not nurses rendering services in the employment of industrial plants exceed their rights as registered nurses and thereby violate the provisions of the medical practice act. The matter has been of chief concern to practitioners in the districts in which there are large industrial plants employing corps of nurses in the operation of first aid stations, plant hospitals, etc.

Realizing the importance of the question, the State Medical Board recently enumerated for the Attorney General's Office some of the services known to have been rendered by industrial nurses and requested an opinion on the validity of such practice, and in reply Attorney General Price has rendered an interesting decision.

The board cited the fact that such procedures as suturing cuts, removing foreign bodies from the eye, under cocaine, routine treatment of burns and other more or less severe injuries, and removing splinters even where some dissection is necessary, are being done by nurses in a number of factories.

Nurses in some plants have also been known to treat other conditions not resulting from em-

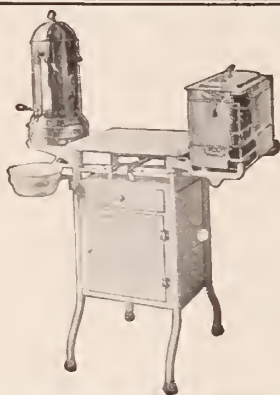
ployment in the factories, such as treating injuries received out of the shop; eye and ear conditions; removing impacted cerumen; treating skin diseases and any other conditions reported to them by the employees, even going so far as to prescribe and supply medicines for employees to take at home.

Many of these services performed by the nurse are not performed in the presence or under the direction of a physician, and such nurses are compensated by the employer and not by the employees treated.

In connection with its request the board presented a record of treatments rendered by a nurse in charge of a factory first-aid station, containing the name of the patient, number of previous treatments, the illness or injury and treatment rendered. The following abstract indicates the illness or injury suffered and the treatment rendered:

"Cold—Treatment: Magnesium sulphate, cold tablets, aspirin.

Boil, right axilla—Treatment: Opened drainage.



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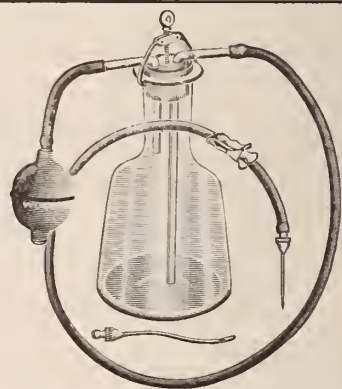
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Carefully reviewing the situation, step by step, Attorney General Price comments on definitions of "practice of medicine," and "practice of nursing," and the construction to be placed on the term "emergency" as follows:

"Section 1286 defines the practice of medicine. This section, so far as it is pertinent, is as follows:

"A person shall be regarded as practicing medicine \* \* , within the meaning of this chapter, \* \* \* who examines or diagnoses for a fee or compensation of any kind, or prescribes, advises, recommends, administers or dispenses for a fee or compensation of any kind, direct or indirect, a drug or medicine, appliance, application, operation or treatment of whatever nature for the cure or relief of a wound \* \* \*, injury, \* \* \* or disease.

"The first sentence of section 1287 is:

"Nothing in this chapter shall prohibit service in the case of emergency or domestic administration of family remedies.

"The rest of the sentence contains other exceptions to section 1286, not pertinent to the question under consideration at present.

"Section 12694 G. C. makes it an offense for any person to practice medicine without first obtaining a license so to do from the state medical board.

Sections 1295-1 to 1295-20, and sections 12715-1 and 12715-2 (106 O. L., 191), constitute the registered nurse's act. This regulates and defines the practice of nursing as registered nurses only.

"Section 1295-6 in part is:

"All persons shall be regarded as practicing nursing as registered nurses, within the meaning of this act, who use the words or letters R. N., Registered Nurse, or any other title in connection with their names which in any way represent them as registered nurses, or who by any means accept employment by representing themselves as registered nurses."

"This section does not define nursing generally, nor does it in any way qualify or affect Section 1286 (supra), nor does it enlarge or further define in any manner the matter of emergency referred to in Section 1287.

"The comprehensive definition of the practice of medicine, as construed by the Supreme Court of this State in *Marble v. State*, 72 O. S., 177, and other cases, certainly brings the treatments above quoted from the record of treatments submitted, within the term 'practice of medicine,' as defined in that section, and the person rendering such service must have a certificate from the state medical board before he or she may legally render such service for a 'fee or compensation of any kind, direct or indirect,' unless such services come within the purview of the first sentence of Section

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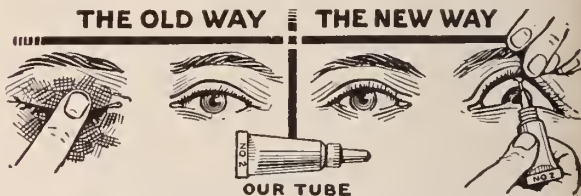
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1287, in that the illness or injury for the cure or relief of which they were performed was an 'emergency.'

"The fact that the compensation to the nurse for her services is not paid by the persons whose illness or injury is treated, but paid for by their employer, does not destroy the character of such compensation and it is deemed to be within the provisions of Section 1286 (supra).

"The legislature did not see fit to more closely define the term 'emergency,' and in the absence of other evidence or expression of the legislative intention, this term must receive its usual and ordinary meaning.

"'Emergency' is defined in Standard dictionary to be:

"'1. Sudden or unexpected occurrence or condition calling for immediate action; a perplexing or pressing combination of circumstances; sometimes, less properly, used in the sense of urgent need or exigency.'

"It must be observed that it would be impractical, if not impossible, to define a hard and fast rule as to emergencies which would be applicable in all cases, but so far as the present opinion is concerned, with the facts submitted, it may be stated that the term 'emergency,' as used in this section, would include such cases of sudden or unexpected illness or injury which call for immediate medical attention.

"Without further facts, it would be impossible for this department to pass upon the emergency character of some of the treatments in the enclosed record of treatments, and no opinion is here expressed as to such, but those quoted are sufficiently definite and complete as statements of fact that this department is of the opinion that in the absence of further facts evidencing an emergency character of the illness or injury treated, service in such cases, consisting of examination or diagnosis, prescription, advice or administration of a drug or medicine or treatment for the cure of the illnesses or injuries therein described, for compensation, direct or indirect, are not services performed in cases of emergency, as described in Section 1287, and that in connection with the other facts included in your statement, such services may be rendered only by or under the direct personal supervision of a person duly licensed to practice medicine in the State of Ohio."

#### Research in Anesthesia

Plans for the operation of the National Anesthesia Research Society were formally launched at a meeting held in Cleveland recently. The objects of the society are to promote the science of anesthesia and to cooperate in the preparation of suitable legislation designed to safeguard both the patient and the anesthetist. Dr. F. H. McMecham of Avon Lake is chairman of the research committee of the society.

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## OHIO HOSPITAL NOTES

—Rejecting bids for the erection of a new five-story hospital entailing an expense of approximately \$1,500,000, the Youngstown Municipal Hospital Commission has approved plans for a two-story contagious unit, not to exceed \$250,000 in cost, which will later become one of a series of buildings in a municipal center.

—Columbus is favored as the site for the proposed new service hospital in Ohio, plans for which are being worked out by the United States Public Health Service. Cincinnati also is under consideration in the event Ohio and Kentucky are placed in one district. Establishment of the hospital is dependent upon action of Congress on a blanket appropriation of \$85,000,000 for service hospitals in various states for the care of invalid and incapacitated soldiers, sailors and marines.

—At a recent meeting of the medical board of the Jewish Hospital, Cincinnati, announcement was made that an anonymous donor had arranged to award prizes of \$60.00 each to the two highest ranking nurses in the first and second years of the training school, and prizes of \$120.00

each to the two highest ranking nurses among the graduating nurses of the hospital.

—Passage of the Whittemore bill, Senate Bill No. 195, by the legislature and its indorsement by the governor legalized the purchase by Summit County of the interests of Columbiana, Mahoning, Portage and Stark Counties in Springfield Lake Tuberculosis hospital. The bill permits any county in a district owning a tuberculosis hospital to purchase the interests of other counties.

—A drive for funds for the erection of a new building with improved facilities will be undertaken by Protestant Hospital, Columbus, in April. Upon the report that 47 per cent. of the patients handled at the institution are charity cases, and that the hospital is going in debt \$1,000 each month, a committee was recently appointed by Methodist ministers of Columbus to aid in raising funds for its maintenance.

—At a special election on December 16, voters of Greene County defeated a bond issue for \$300,000 for the purpose of building a county hospital as a memorial to soldiers, sailors and marines of that county.

—Two of Columbus' largest hospitals are planning extensions during 1920. Architects are now drawing plans for a new wing at Grant Hospital which will provide room for 60 additional patients,



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and space for 100 more patients will be available at Mt. Carmel Hospital on the completion of a nurses' home now under construction. Agitation for the erection of a city contagion hospital, for which bonds to the amount of \$25,000 were issued four years ago, has been revived.

—Formal transfer of the new Good Samaritan Hospital, Sandusky, from the parish of Grace Church to the Good Samaritan Hospital Association was affected January 1. The building is nearing completion and is expected will be equipped and opened to the public soon.

—The building of a new city hospital for East Cleveland is the main item of the program of the East Cleveland Chamber of Commerce for 1920.

—Recommendations that immediate steps be taken to provide Canton with an isolation hospital for contagious disease commensurate with the needs of a city of 100,000, are contained in the report on the sanitary survey of the city recently made by F. E. Harrington, epidemiologist for the United States Public Health Service.

—At a meeting of the staff of St. Rita's Hospital, Lima, officers were chosen for the coming year and heads of departments appointed. Dr. W. W. Beauchamp was selected as president of the staff; Dr. T. R. Terwillinger, vice-president and Dr. Paul J. Stueber, secretary.

—Secretaries of Ohio Rotary Clubs, in session at Columbus January 6, discussed plans for the proposed system of eight hospitals for crippled children in Ohio, in the establishment of which the clubs hope to cooperate.

—Harbert Hospital, Bellefontaine, owned by Dr. J. P. Harbert, was formally opened to the public on New Year's Day. The normal capacity of the new institution is six, with emergency accommodations for eleven patients.

—Members of the State Board of Administration recently inspected sites in Hamilton County as a location for the new state hospital for feeble-minded, for which the legislature appropriated \$650,000 last winter. The board is said to be favorably disposed toward the Ancor site, a 1400 acre tract of land located 12 miles from Cincinnati, provided it can be obtained at a suitable price from the government by which it was purchased during the war as a location for a nitrate plant.

—One of the first results of the hospital and health survey being conducted by the Cleveland Hospital Council in conjunction with the local health department will be an early campaign for a great increase in hospital facilities. Data obtained shows that the city has much below the average hospital facilities of large cities, having less than half the number of beds provided by Boston hospitals.

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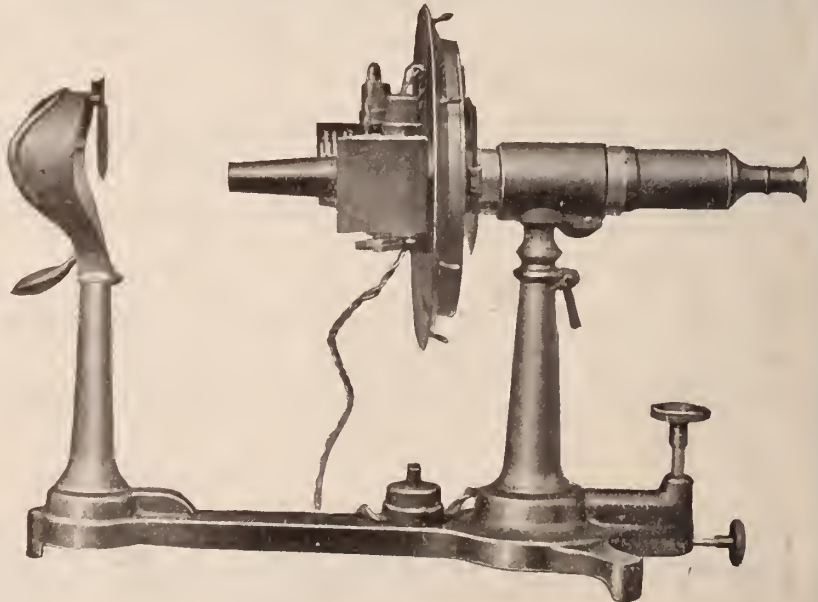
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**Next Meeting of the State Association,  
Toledo, 1920**

## EDITORIAL COMMENT

by D. K. M.

### Legislation

Ohio's Eighty-third General Assembly completed the longest legislative history for this state after thirteen months of almost continuous session when adjournment was taken on February 11.

It is timely to review briefly the enactments affecting the medical profession and medical practice. Perhaps standing above all others in general interest is the Hughes public health code, which in spite of the Griswold law amendments, gives Ohio a first class public health administrative machinery.

\* \* \*

Of extreme importance was the enactment of the Talley law strengthening the penalty section of the Medical Practice Act, and under which the State Medical Board has been aggressively prosecuting violators. When confronted with prosecution under this law in Cleveland recently, several chiropractors submitted affidavits by a dozen or more of their cult, claiming prejudice on the part of the State Medical Board. It is significant that each of these complaints was a "graduate" of a chiropractic school which had refused permission to the State Medical Board to investigate, and give it a rating or which had been investigated and found deficient. It is also interesting to note that these chiropractors were represented by two of the state's best known attorneys, including the president of the State Bar Association, employed as advisor and lobbyist during the present legislative session, and a prominent legal light of Cleveland mentioned some years ago in connection with nomination for the governorship.

\* \* \*

It is presumed that the joint legislative committee on administrative reorganization will proceed with its investigation of state departments looking toward the enactment of considerable legislation during the next session. It will be remembered that an analysis of the proposals made in a preliminary report was published in the January *Journal*.

\* \* \*

The present legislature was wise in not enacting compulsory state health insurance legislation; including occupational diseases under the benefits of the workmen's compensation law; granting special privileges to the chiropractors and other cults, nor recognizing Providence's special dispensation to the Christian Scientists.

\* \* \*

Data will be collected by the State Department of Health on occupational diseases through the enactment of House Bill No. 450 requiring physicians to report to the State Department of Health certain occupational diseases enumerated

in the bill, and others to be designated by the department.

\* \* \*

With legal and constitutional questions arising on prohibition enforcement bills, those of later date undertaking to repeal earlier enactments on which referenda were pending, state legislative enforcement regulations on the prescribing and compounding of drugs containing intoxicants are such as defined under the national prohibition act. A complete analysis of these regulations is published on page 175 of this issue.

\* \* \*

In addition to taxation and revenue problems which were especially difficult of solution and which required a large part of the time utilized in the lengthy session, the medical profession is directly or indirectly interested in enactments providing a new institution and new facilities for the care of the feeble minded; for county and inter-county hospitals and tuberculosis sanatoria and dispensaries; for the strengthening of sanitary districts; stream pollution and sewage disposal legislation; the provision for a new institution for crippled children; a new department of hospital registration in the State Department of Health; better control of infirmaries and juvenile delinquency; more general inspection of public schools; severer penalties for issuance of school certificates to children; greater safety provided in mines, and stricter regulations of electric wiring in mines; prohibition of employment of women in molding rooms; requiring firms employing more than five persons to contribute to the workmen's compensation fund; double levy permitted for mothers' pensions, and the correction of laws for the commitment of the feeble minded.

#### The Vital Problem Again

With the adjournment of the Eighty-third General Assembly of Ohio, it is certain that the compulsory state health insurance proposal cannot be acted upon in this state before January of 1921. It is, however, a live issue at the present time. This fact was emphasized at a recent meeting in Columbus of the special committee of the State Association appointed by Council to study the situation relative to this proposal in Ohio, mention of which was made editorially in the February issue of *The Journal*.

This committee, of which Dr. J. H. J. Upham, chairman of the Committee on Public Policy and Legislation, is ex-officio chairman, will recommend to council at its next meeting that steps be taken to thoroughly disseminate among the members of the profession in Ohio information on the problems presented by the proposal for state health insurance.

*The Journal* has undertaken from month to month to refer in detail to the latest developments on this subject not only in Ohio but in other

states. This policy will be continued, but it is hoped that the present plan can be supplemented within the near future by other means of direct information to the profession.

Some time ago *The Journal* predicted that either Ohio or New York state would be the first to try such a paternalistic innovation. The American Association for Labor Legislation is apparently centering its efforts for the initial trial in the latter state.

In a recent paper, extracts from which are published in this issue on page 185, Dr. E. MacD. Stanton, chairman of the committee on public information of the Medical Society of the County of Schenectady, points out the subtle purpose of the American Association for Labor Legislation, to which can be traced ninety per cent. of the propaganda favoring such a proposal, and which he states is composed of a group of lay uplifters, none of whom as far as he can ascertain ever has had any objective experience with disease or the effects produced by disease.

That so-called health insurance is not health insurance at all, but only a thinly veiled scheme for forcing charity upon a portion of the community which neither requires nor desires charity, is the declaration of Dr. Stanton.

It is also emphasized by Dr. Stanton that none of the parties most interested—namely, the working man, the employers or the medical profession, has ever declared in favor of the plan.

It is conservatively estimated that a system of compulsory health insurance would cost New York state \$200,000,000 annually. A minimum estimate of the cost in Ohio is \$90,000,000, which great expense would come out of the pockets of the people generally, and benefit a comparatively small proportion of the population.

\* \* \*

In a recent letter to the editor of this *Journal*, Dr. Stanton makes the following observations relative to the fundamental difference between workmen's compensation and compulsory health insurance laws:

"The argument for Compulsory Health Insurance is based upon the assumption that the insurance method is a fairly efficient method of distributing sickness costs over large groups of individuals. This presupposes that the details of administration can be so arranged that the waste due to overhead expenses, the necessity of carrying a large reserve, and the waste due to over-emphasized illness and malingering does not consume a major portion of the funds before any moneys can go to the actual relief of real cases of sickness.

"So in the world's history the above mentioned requirements have never been met. The available data shows that a very large proportion of the funds is wasted.

"A report recently issued by the Public Utilities Mutual insuring organization—The Utilities Mutual of New York State shows that from July



1, 1914 to December 31, 1918 it has cost the 14 largest self-insuring groups in New York State \$2,178,000 to distribute \$5,353,000 or 41½ cents to distribute \$1.00 in benefits under the relatively simple conditions encountered in the Compensation work. It also costs the State of New York an additional 4½ cents to supervise the spending of each dollar. This means that in the State of New York it actually costs about 46 cents to distribute \$1.00 of benefits, including medical services, under the compensation law.

"The compensation problem is relatively very simple. The costs above mentioned are paid by business concerns spending their own money. What would the overhead and collateral waste be under a politically controlled system of Compulsory Health Insurance, attempting to cover even such minor illnesses as common colds?

"The medical profession knows that the financial resources available for the prevention and treatment of disease are never any too great. Can the medical profession afford to permit the consumption of a scheme in which nearly one-half of the available resources will be wasted before a single penny can go to the care of cases of real sickness?"

#### If You Use Exempt Preparations Register in Class V.

Pursuant to the announcement made following the conference of representatives of the State Association with officials of the Internal Revenue Department last fall, a revised pamphlet setting forth regulations governing the Harrison Narcotic Law has been issued.

The rules covering the writing and filing of prescriptions by physicians are unchanged. In fact, only one change affecting medical practice is noted in the revised pamphlet.

Heretofore physicians who prescribe narcotics have been required to register in Class IV and pay a tax of \$3.00 per year. Under the new regulations, those who use certain preparations and remedies containing small amounts of narcotics, which the law defines as "exempt preparations," are now required to register in Class V as dealers in exempt preparations, without, however, being subject to an additional registration fee.

Since February 25, 1919, physicians who use exempt preparations in their practice have been required to keep accurate records of the prescription of these preparations, including the date of prescribing, name of person to whom prescribed, address, name of preparation and quantity.

The exempt preparations and remedies include those which do not contain more than two grains of opium (paregoric), or more than one-fourth of a grain of morphine, or more than one-eighth of a grain of heroin, or more than one grain of codeine, or any salt or derivative of any

of them in one fluid ounce, or, if a solid or semi-solid preparation, in one avoirdupois ounce; liniments, ointments, or other preparations which are prepared for external use, only, except liniments, ointments, and other preparations which contain cocaine or any of its salts or alpha or beta eucaine or any of their salts or any synthetic substitute for them.

#### Your Own Personal Future and the Future of Medicine

That the medical profession in the various communities in Ohio must become more wide awake to the menace confronting medical practice, more alert to the possibilities when firmly united, and aggressively active through the medium of organization, is emphasized in a comprehensive report recently submitted to the Cleveland Academy of Medicine by a special committee consisting of George E. Follansbee, M. D., C. L. Cummer, M. D., and R. K. Updegraff, M. D., appointed for the purpose of submitting proposals for a re-organization and an increased program of activities for the Cleveland Academy.

After enumerating accomplishments which have been made possible through strong organizations, comprising men of similar interests in other lines of endeavor, the report declares that only the great medical profession, as widely as it touches public life, has been blind to the desirability of such influential participation in community life and has failed to appreciate that the trend of the times in all other professions, businesses and trades, is toward a policy of assertiveness and aggressiveness in pushing the profession if not the individual members of it, into the life of the community.

"The Future of Medical Practice" is the subject of the committee's report which declares at the outset and bears out through the remaining pages, that it concerns "your own personal future."

That the profession of medicine as now practiced is in danger of being engulfed in "state medicine," and that unless the profession is properly forewarned and prepared, the doctor, whether general practitioner, surgeon, specialist or laboratory worker, may become a mere tool of capital, labor and the politicians is also emphasized.

"The pauperization of the profession can be prevented by concerted and united action of its individual members" declares this committee.

A resume of the committee's report is published on Page 181 of this issue, and while it undertakes to emphasize the profession's problems in Cleveland especially, it is absolutely pertinent to each physician in every community in Ohio.

As a summary, the committee report concludes with the following ten points:

1. The inefficient condition of the profession.
2. The need for effective organization.

3. The tendency of all classes in modern society to organize for attaining common purposes.
4. The importance of the economic feature, if only for the maintenance of a scale of remuneration which will make good medical work possible.
5. The need of an organization to secure:
  - a. Scientific programs.
  - b. Economic justice.
  - c. Proper influence in legislation.
6. It is desirable from an altruistic standpoint that organized medicine, i. e., Doctors of Medicine, have due influence in public health education.
7. A full time Executive Secretary is essential in a really efficient organization.
8. To accomplish the purpose additional funds must be secured. This could be done by raising the dues.
9. By the proposed division of membership into classes with a differential scale of dues no hardship would be inflicted on any member.
10. Action must be taken promptly on account of pending legislation.

#### Health and Good Roads

Good highways have a definite bearing on the health of the nation. They permit better medical attention to sufferers in rural communities.

Good roads allow city people to frequently flee from the dust and dirt of the city and enable them to breathe wholesome, moving air. Excursions into the country permit the body to relax and allow the mind to dispel thoughts of the day's work. These are points brought out by the B. F. Goodrich Rubber Company in a plea for good roads for health's sake.

There are fewer physicians in the rural districts than in the cities; there are fewer nurses, and hospital facilities. The inadequate supply of doctors in the country is largely due to the lack of means of getting around the country without extreme hardships, says a bulletin issued by this company.

The good roads problem is important to physicians, not only because it is difficult to travel through mud to see their patients, but also because it is next to impossible to transport patients needing special care, or to consult with specialists at a distance. The number of deaths of women in child birth is proportionately greater in the country than in the city, and the number of babies who die within the first 30 days after birth is far greater.

Much of the future development of public health work, visiting nursing and medical service generally in the rural communities depends upon the development of good roads. Likewise will be hastened rural community hospitals and transportation thereto.

City residents are vitally concerned in the condition of rural roads from the standpoint of health protection because they are dependent on

good roads for fresh milk. Large cities are furnished milk from remote rural regions. Bad roads delay its delivery. Often milk accumulates two days or more before delivery from the farm. Bacteria often develops dangerously in the meantime. Good roads will emancipate the cities from depending upon existing clumsy means of transportation.

Aside from their value as a medium of transportation and their economic value to individual communities as well as to the states and the nation as a whole, better highways are a factor in health that cannot and should not be underestimated.

#### New Medical Fee Schedule

*The Journal* has on a number of occasions expressed its gratification over the cordial relationship which exists generally between the medical profession and the medical department of the State Industrial Commission. Hampered as it has been by too few examiners, paid inadequate salaries, the medical and claims department of the Commission has co-operated with the headquarters of the State Association and has indicated a willingness at all times to iron out difficulties arising from misunderstanding or from the claims of physicians for remuneration under the Workmen's Compensation Act.

It is conceded that the present medical fee schedule under the state law is inadequate. There has been no increase in the schedule for over two years, during which time every item of expense in connection with the practice of medicine has increased from one hundred to two hundred per cent.

Recognizing that the foundation on which the success of the Workmen's Compensation Act rests is adequate remuneration of physicians for their services, in connection with the administration of the law, Dr. Thurman R. Fletcher, chief medical examiner of the Commission, recently invited a special committee of the State Association, appointed for that purpose, to meet with him and confer on a proposed new schedule.

This committee, appointed by Dr. J. F. Baldwin, president of the State Association, believing that the inadequacy of the fees allowed for original attention or operation really places a premium on poor results requiring a greater number of subsequent treatments and delay in the speedy recovery of the injured workman, has recommended to the Industrial Commission a "flat rate" schedule. By means of this new flat rate schedule, if adopted, it is hoped that the best possible medical attention for beneficiaries under the act will be secured, including original attention or operation and subsequent treatment, compensation for which to the physician in most instances will be included in one item. It is expected that the new schedule will be sufficiently adequate in all cases to cover the ordinary



amount of subsequent treatment and generous enough to attract efficient medical service. Another advantage of the flat rate plan would be the minimizing of the amount of book-keeping and detail work now required of physicians and the claims department of the Commission.

If the effort of this committee is successful, it will prove another tangible evidence of the value of medical organization and of cordial relationship and co-operation by the Association with governmental functions. The committee is composed of Drs. C. D. Selby of Toledo, chairman; J. F. Baldwin of Columbus; J. R. Beiter of Canton; Robert Carothers of Cincinnati; W. P. Chamberlain of Cleveland; George P. Dale of Dayton, and R. H. Wilson of Martins Ferry.

### The Cultist's Presumption

Under the title of "A Slight Testimonial to Christian Science" a man of letters in Columbus recently penned the delightful bit of satirical verse given below:

When sore beset by grievous ills  
And pains that flit about  
Avoid the use of nauseous pills  
Just pray and shoo them out.

To Christian Science pin your faith  
This life will soon be gone,  
There is no such thing as "Death".  
"Tis simply passing on."

Why should a doctor have the nerve  
That with a passing nod,  
Dares to compete with those who serve  
In partnership with God.

If pus is piling up inside  
With danger to your life,  
Let Christian Science be your guide  
Beware the surgeon's knife.

Wind up the prayer machine and wait  
Till it performs its task,  
For when it fully strikes its gait  
It gives you all you ask.

With trust in God and faith in prayer  
You will begin to mend,  
The pus will vanish into air  
And all your troubles end.

\* \* \*

That the chiropractic "art" is also a "gift from heaven" is the presumptuous claim of a practitioner of that cult who advertises in verse form under the inclusive heading of

### "HEALTH RESTORED AND YOUTH RENEWED"

If you want your youth renewed,  
Go to a Chiropractor.

Although the doctors him have sued,  
Trust to the Chiropractor.  
He'll fix your neck, he'll fix your back,  
And open up the nery track,  
Through which your life's impulses flow  
And to each part and organ go.

Your vertebrae he'll put in place  
And soon your ailments will retrace.  
Aglow, a prickly feeling comes;

On nerves once crushed the new line runs,  
And soon you'll feel quite young again  
Though medicine you've tried in vain.  
No doubt the gift has come from Heaven,

And to Chiropractors has been given.  
Try Dr. Harris or his mate

And I my life for yours will stake.  
They'll do you good, your health renew  
If nerve at all there is in you.

They're modest and much do not claim,  
Still they're nature's servants just the same.  
They'll roll away the stone and give  
The soul in you a chance to live.

### The Annual Meeting Approaches

Every day brings us closer to the 1920 annual meeting of the Ohio State Medical Association. The dates as you know, are June 1, 2 and 3, and the place is Toledo.

It is not too early for you to make plans to leave your practice for the first week in June. This may be a good opportunity for you to combine a much needed vacation with an attendance at the state meeting. Why not mark your calendar *now*?

The general committee on arrangements, the various local committees, and the section officers have been in constant cooperation with council in an effort to make this one of the most interesting and beneficial sessions in the history of the Association. And they're going to be successful.

The section officers have prepared splendid scientific programs which they are now whipping into final shape to submit to state headquarters on March 10. If you are on the program for an essay or discussion and have not furnished your section officers with all the needed information (title of paper and abstract, to be followed at an early date by a complete copy of the essay) kindly do so at once.

The section officers for this year's meeting are:

Section on medicine—Chairman, G. F. Zininger, M. D., Canton; Secretary, R. A. Ramsey, M. D., Columbus.

Section on surgery—Chairman, Harry Noble, M. D., St. Mary's; Secretary, Howard Stitt, M. D., Washington C. H.

Section on obstetrics and pediatrics—Chairman, John Cardiner, M. D., Toledo; Secretary, Harold J. Morgan, M. D., Toledo.

Section on eye, ear, nose and throat—Chairman, J. M. Ingersoll, M. D., Cleveland; Secretary, W. W. Alderdyce, M. D., Toledo.

Section on dermatology, proctology and genitourinary surgery—Chairman, M. B. McGonigle, M. D., Toledo; Secretary, John G. Keller, M. D., Toledo.

Section on nervous and mental diseases—Chairman, F. C. Wagenhals, M. D., Columbus; Secretary, R. Harvey Cook, M. D., Oxford.

Section on hygiene and sanitary science—Chairman, A. W. Freeman, M. D., Columbus; Secretary, J. R. McDowell, M. D., Columbus.

### Fallacy of Nationalization

In the February issue of *The Journal* an editorial from the Cincinnati Enquirer was repro-

duced which pointed out the serious and really vital objections to the proposed plan in England for the nationalization of physicians and surgeons through which they would become public servants, thereby detracting from the individual interest and effort of the men of science in their work of laboring for the betterment and the maintenance of public health.

A further elaboration of this idea is found in a more recent editorial in the same newspaper under the above heading. This editorial is herewith reproduced:

"Nationalization is a dream, a fallacy, an impractical chimera. As a British writer well says, the present demand for nationalization constitutes a curious paradox, because its history is the history of blunders and loss. State control never has been efficient, and cannot be so. Wage earners fancy they can get better wages if employed by the State. Whence then shall come the tax revenues of the State if all industry is within its control? The pay of employees could come only out of the yield of industries. Even a superficial thinker must realize that such yield would be inadequate.

"England's war control of the postoffice and the railroads which before the war were paying institutions has resulted in three times the former cost and abominable service. America's experience with Government control of telephone and telegraph and railroad systems has developed a chaotic nightmare.

"In the view of the writer referred to the ultimate cause of the failure of nationalization in every country in the world is that it misuses human motives. It is invincibly urged that the instinct of self-preservation under private enterprise promotes efficiency, for bad service means loss. Too, back of costly staffs, push bureaucrats and politicians demanding that wasteful things be done for the sake of winning votes. Congressmen and statesmen cower before the fear of the opposition of industrial groups. No bureaucratic system ever can replace the efficiency and economy and normality of private control.

"Behold the superlative of nationalization under the Sovietism of Russia—industry nationalized, education, the children, the women, politics all nationalized and every form of religion rejected!

"We desire nothing of nationalization in this country, nothing of paternalism on the part of Government. We desire individual liberty, individual initiative, the genius and urge and ambition of private enterprises."

#### The Country Doctor

A tribute to the country physician as a necessary, even vital factor in the wellbeing of a community is found in a recent editorial in *The Ohio State Journal*. So acute is the situation in many of the rural communities in this state and elsewhere on account of the shortage of physicians, and the reluctance of the public to realize the value of professional services and properly compensate for them, that the fallacy of subsidizing the country doctor and placing him on the basis of a direct employe by the state has been suggested in New York.

The editorial is reproduced below, including the reference in the final sentence to the proposal in New York:

"From early days the country doctor has worked hard and made little money. Considering the importance of his relation to the happiness and wellbeing of the community, he gets the smallest reward society offers any of the men in learned professions. His office hours are day and night. Distance never interferes, weather has no terrors to stop him. He gets no cash in advance. He cannot exact the higher fee for night services. When there is a call he goes, for they are all his neighbors. If they pay he is fortunate. If they wait he gets along some other way. The largest item on his ledger is the charity service. The next is the unpaid bills. From the latter he hopes to get payments sometime. He works and fights and smiles and sticks to the job. He helps carry the burdens and sorrows of the community. When he dies he has many thousands due him but few dollars in the bank.

He gets closer to the lives of the individuals than the village preacher, because he stays in the community longer, because there are more calls for physical ailments than for soul torture. He is a necessary part of the community, for health must be conserved. No man serves his day and generation with higher purpose, greater unselfishness, more generous hand. Larger fees and more of them are offered in the cities and the country doctor yields to the material advantage. There are communities where it has been impossible to get physicians to locate. Help had to be sent to many communities in Ohio during the influenza epidemic last year. In New York state there is talk of the state's subsidizing the country doctor, guaranteeing him a fair living and inducing him to stay in the small places."

#### Physicians Wanted

State Association headquarters have been swamped during the past few weeks with requests for physicians from communities in need of medical services. Most of these are rural communities desiring permanent resident physicians, where the present need has been accentuated by influenza. In addition to those locations listed on page 202, we call attention to the following:

Kelley's Island, with a population of 800 in winter and 1,000 in summer, is without medical attention. The Kelley's Island Lime and Transport Company will pay a salary for its industrial work, which in addition to the general practice, should offer a good field for a physician.

Tippecanoe, Harrison County, is temporarily without medical services. Mr. J. C. Steward, druggist, advises that help will be appreciated as the village is dependent on distant physicians, and will furnish full details upon request.

If your 1920 dues are unpaid, this will be your last copy of *The Journal*, as postal regulations forbid keeping names of unpaid subscribers on the mailing list longer than three months.



## The Heart in Focal Infections\*

Dr. J. E. Greiwe, M. D., Cincinnati

Editor's Note.—The time is past for judging the inroads of infections, especially focal, by valvular, endocardial, and myocardial involvement. Refinements in the technique of cardiac examination make it quite possible, at the present time, by means of the polygraph and electrocardiograph, to determine the functional manifestations of heart irregularities due to the results of focal infections. Thus premature ventricular systole, heart block, auricular flutter, paroxysmal tachycardia, involvement of the bundle of His, and various arrhythmias all point to the incident of subtle toxæmic effects upon the heart. The discovery of these conditions goes far in clearing up puzzling ailments and in bettering the prognosis of focal infections. It is interesting to note that Dr. Greiwe has the courage to differ with those who can find no other causative factor in aortitis than syphilis. As Dr. Greiwe suggests chronic septicaemia, due to *pyorrhoea alveolaris*, must be given serious attention in the etiology of inflammations and degenerations, as well as dilatations of the ascending, the arch, and the descending aorta.

IN ASKING your attention to the subject of the heart in focal infections, I feel that it will be a loss of time to trouble you with a paper demonstrating the liability of endocarditis, pericarditis and myocarditis following in the wake of such infections. It will be of little value to insist that valvular diseases of the heart result from septic processes in the tonsils, infections about the teeth, and pathogenic processes in the gall-bladder. Indeed, our knowledge of the etiologic value of the streptococcus, the staphylococcus, the pneumococcus, and a variety of other organisms, is now so common that I have determined to spend the time allotted to this paper in the discussion of another phase of the question: viz., the disturbance of heart functions in the course of focal infections.

It may be well at the start to call attention to the fact that some of the changes in the functions of the heart are of a temporary nature: that is, with the disappearance of the focus of infection, the heart action again returns to the normal. On the other hand, disturbed heart function may be one of the earliest manifestations of serious damage to the heart, and it may be the beginning of a fatal process.

In some of the papers in this symposium, your attention has been called to the character and variety of focal infections. I will, therefore, not dwell upon this again, nor will I burden you with what every text-book on clinical medicine has made sufficiently clear, viz., the relative frequency of mitral, aortic, tricuspid and pulmonary valve lesions. It is well to bear in mind, however, that whenever we have extensive endocarditis, the myocardium is almost of necessity involved to a certain degree.

### CHANGES IN CARDIAC FUNCTION

Changes in heart function, whether in the course of acute or chronic infective processes, may be due to actual organic disease of the myocardium, or of the specialized tissue of the heart, or they may be the result of toxins that leave no ap-

preciable damage in the way of macroscopic or microscopic evidence.

It becomes our duty, therefore, in the first place to recognize the development of changes in cardiac function, and then to attribute to these functional disturbances their real value. Fortunately, much has been accomplished in both directions. Nevertheless, there is still much confusion in the interpretation of the irregular heart beat. The more intimate study of our clinical material has been made possible by the use of graphic methods, by means of the polygraph and by means of the electrocardiograph.

The changes in the heart functions manifest themselves in alterations of the heart beat. A dropped beat is after all not so frequent in the infections, and the term *skipped* beat does not actually express what is most frequently encountered in irregular heart action. The all too frequent use of these terms rather implies that there is not a real appreciation of what is actually taking place in the heart. These terms apply to certain well defined changes in heart action, and the loose use of such terms tends to inaccuracy in diagnosis, and leads to much confusion in both diagnosis and prognosis.

Since we now have the means of differentiation, it becomes our duty to resort to graphic methods of analysis. The whole subject of the irregular heart beat was, up to a short time ago, a blurr upon the diagnostic and prognostic horizon. Today it has a definite meaning, and carries with it a definite diagnostic value and often a distinct prognostic meaning.

### TRACINGS, POLYGRAMS AND ELECTROCARDIOGRAMS SHOWING VARIOUS CONDITIONS

In order to bring this question before you in a practical way, let me call your attention to a number of tracings demonstrating one of the most frequent changes in the heart action. In the normal heart beat, the auricular contraction is followed by contraction of the ventricle. The difference between these two contractions is usually about one-fifth of a second. It often happens that the time element of one-fifth of a second is markedly reduced, but it still more frequently

\*Read before the Surgical and Medical Sections of the State Medical Association, during the 73rd Annual Meeting at Columbus, May 7, 1919.

happens that the ventricle beats before the auricle. This, then, is referred to as a premature ventricular systole. The result upon the pulse beat is usually quite distinct, but sometimes the ventricular beat comes so early that there is very little blood in the ventricle, with the result that we have an almost imperceptible effect in the radial artery. It is just this character of pulse which is too often referred to as a dropped beat, or a skipped beat. It is neither—and because the premature ventricular systole has, as a rule, such a different prognosis as compared with that of the true dropped beat, we should attempt to an-

alyze the situation. If one were to follow the old rule in physical examinations—to feel the pulse while listening to the heart—the real condition is usually determined with ease. Then we heard the premature sounds as weak and early and we realized that the heart had not dropped a beat, but that the ventricular contraction came too early.

A glance at the following tracings of the premature contraction of the ventricle, both in the polygrams and the electro-cardiograms, will simplify the subject.

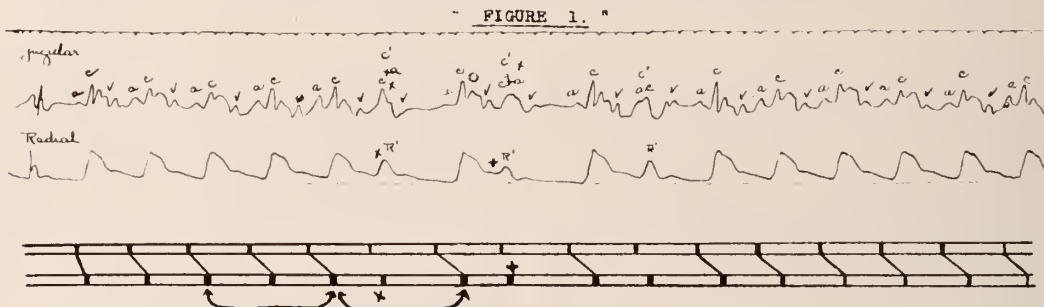


Figure 1. Simultaneous tracings of jugular and radial curves showing ventricular premature systoles (C' C' r' r')—The pause following is compensatory and due to the failure of the stimulus from auricle to provoke a ventricular contraction, the ventricle being in a refractory stage subsequent upon a premature contraction.

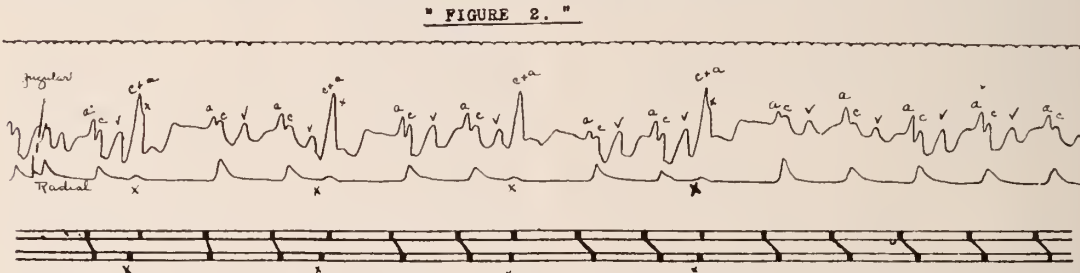


Figure 2. Polygram showing typical premature ventricular systoles. In figure No. 2 it will be observed that where the premature heat shows in the radial pulse we have a corresponding large wave in the jugular. The "C" wave here precedes the "A" wave and the "A" falls in with the "C" wave as demonstrated at the point marked "X" in the jugular tracing where it has developed a shoulder on the declining stroke. The reason for this shoulder not being evident in all the large "C"—"A" waves is due to the fact that we have slight changes in the time between auricular contraction. Clinical history of N—— Case with results of four dental operations.

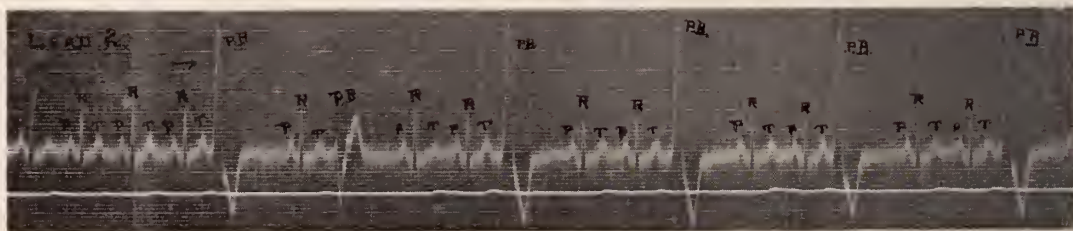


Figure 3. Electrocardiogram Lead No. 2—premature beats arising in right ventricle—(P. B.). With removal of foci about roots of infected teeth this irregularity disappeared completely. The complex (P. B.) is ectopic in origin and premature, the auricular event "P" being embedded in the complex of the premature ventricular beat.

As a contrast to the premature ventricular systole let me call attention to a true dropped beat—a real case of partial heart block.

#### HEART BLOCK

By heart block is meant an interference with the function of conduction of the impulse from

the auricle to the ventricle. In the simplest forms of this disturbance, if one does not employ the graphic method, a change in function may be missed in the examination, since we may have merely an increase in the conduction time, which means that the period of one-fifth second in a normal heart may be increased to two-fifths of a



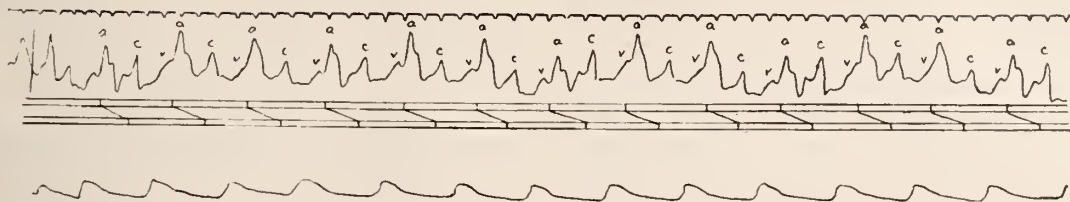
" FIGURE 4. "

Figure 4. Polygram—showing prolongation of conduction time—"A-C" interval of over two-fifths second. This is the earliest stage of heart block—a delay in impulse passage from auricle to ventricle. Tracings.

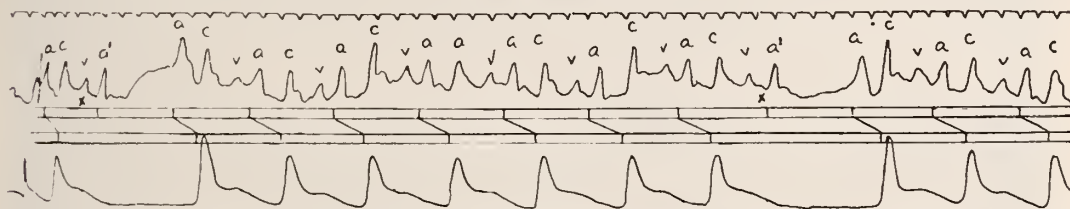
" FIGURE 5. "

Figure 5. Polygram showing partial block—"A" marked "X" in the jugular tracing is a true dropped beat. There is no ventricular response to this auricle contraction—hence the long pause in the radial tracing. Tracings.

second or more. With a prolongation of the conduction time to three-fifths second—the ventricle fails to respond, and thus we have a true dropped beat. We have more contractions of the auricle than of the ventricle. This dropping of the beat may be only occasional, and then one refers to it as partial heart block.

The earliest manifestation of partial heart block is, therefore, a prolongation of the conduction time, and the next is a partial block with the dropping out of a ventricular contraction. When the contractions of auricle and ventricle are absolutely independent, we have a complete heart block.

The tracings of partial block herewith shown resulted from acute tonsillar infections. Fortunately both cases, at the end of a long period of observation, returned to the normal so far as time of conduction and partial block are concerned. With the disappearance of the tonsillitis the heart beat became normal.

I have called attention to these instances of irregular heart action resulting from focal infections, because of their clinical importance. In the cases cited, the etiologic factors were infections from the tonsils and alveolar suppuration.

#### PREMATURE VENTRICULAR SYSTOLES

Ventricular premature systoles are not uncommon in focal infections, but at the same time, it is well to recognize the fact that premature ventricular systoles are much more common in infections of a chronic character. Case No. 2 is of more than ordinary interest, because the patient was, at the time of the examination, the subject of a long standing valvular disease with changes in the shape and size of the heart. This case teaches a very distinct lesson, because with the recognition

of this form of irregularity, a search was made for septic foci, the theory being that the chronic valvular lesion was probably not the cause of the heart's irregularity. It would have been quite a human error to attribute the premature ventricular systoles to organic changes in the heart muscle. On the other hand, I am always suspicious in the presence of this form of irregular heart action that there may be extrinsic causes and, therefore, that the disturbance is not of an organic, but of a functional character. Numerous foci were found about the roots of the teeth. With the removal of these foci, the irregularities disappeared, and the heart, relieved of the mechanical embarrassment due to premature ventricular systoles, improved to such a degree that the patient was able to resume his game of golf. His family physician assures me that he no longer has any heart irregularity, and that his heart condition is quite satisfactory.

In the instances of heart block which I have presented, I take it for granted that such a disturbance is of a graver character as a rule, but in the first case the block entirely disappeared with the disappearance of the rheumatic tonsillitis, and in the second case there remained, after the acute process, a prolongation of the conduction time. This fact, and the evidence developed by the experimental use of digitalis, would seem to indicate that the patient had a definite organic lesion in the His bundle.

#### INVOLVEMENT OF THE BUNDLE OF HIS

In heart block, occurring in the course of an acute infection, we may be dealing with a definite pathologic change in the heart, making pressure upon the bundle of His. This specialized tissue may be directly involved by way of a hemorrhage,





the arch and descending thoracic aorta. The left ventricle may or may not be enlarged. I present a typical picture in the X-ray of such a process. Now, while syphilis is very often at the bottom of such a process, and while typhoid fever undoubtedly has an important bearing on the etiology of a considerable number of such instances, I am convinced that chronic septicaemia, due to pyorrhoea alveolaris, must be given serious attention in the question of causation. It is not fair to jump at such conclusions, but a careful study of hundreds of such clinical cases, a negative history of the commonly accepted causes and a long standing condition of suppuration and disease of the gums bring about a well founded suspicion as to probability at least that the disease may have originated in the gums.

#### RESUME

It is, of course, unnecessary to say any more upon the question of prognosis. This will depend upon the early recognition and the proper employment of means to remove the focal lesions.

The care of the teeth, as now advised by the profession, must certainly have its influence by way of prophylaxis. Save the teeth, if possible, but remove every definite focus in the gums and in the alveolar process. Complete removal of the tonsils, if diseased, is a sane and safe policy, but save the tonsils if there is no definite evidence of trouble there.

It must be evident that a closer study of the irregular heart beat is essential. A search for focal infections should at once be instituted, for to treat all heart irregularities with digitalis is an exceedingly unsatisfactory, and, at times, dangerous procedure. In the cases of partial heart block, digitalis may increase the damage. A bad case may be made worse by increasing the degree of block.

We may often be disappointed with our search for the focus of infection, but a few successful cases in which we establish the relation of cause and effect will more than pay us for the effort expended.

1801-7 UNION CENTRAL BUILDING,

## Septic Foci in Relation to Bones and Joints\*

Robert B. Cofield, M. D., Cincinnati

Editor's Note.—Dr. Cofield deplors the tendency of making a snap diagnosis of rheumatism in connection with a painful inflamed joint. While septic foci are responsible for the production of arthritis in the majority of cases, we must not ignore the influence of injury and metabolic disturbance as causative factors of joint symptoms. A history of direct or indirect injury will usually point to traumatic arthritis, although it may be difficult, occasionally, to illicit recollection of the sprain or contusion. It must also be remembered that trauma may complicate metastatic joint infections and that metabolic disturbances may modify the whole morbid process and influence the progress of the disease as well as the treatment. It is also possible, as Dr. Cofield points out, that infected joints may become septic foci in themselves and may be responsible for the continuation of the disease even though all other possible foci are eliminated.

**F**OCAL infection, as an etiological factor in the production of diseases of the bones and joints, has become so universally accepted by the medical profession, that it threatens to blur our vision of all other causes. It is only by a careful consideration of the various factors which are capable of producing inflammation in these tissues that we are able to arrive at a definite conclusion as to the relative importance of septic foci.

One of the most serious accusations that can be brought against the physician at the present time, is his failure to make a thorough study of the pathological condition which he has under consideration. Too often, a painful, inflamed joint calls forth an immediate diagnosis of *rheumatism*; this immediately suggests infection and forthwith a search is started for septic foci, which as likely as not, are entirely foreign to the true cause of the lesion from which the patient is suffering.

While it is probably true that every type of non-traumatic bone and joint infection is a metastatic manifestation of a primary focus in some other part of the body, it does not necessarily follow that septic foci are the only causative factors in the production of arthritis.

We must not, therefore, ignore the influence of injury and metabolic disturbances in the production of joint symptoms.

#### TRAUMATIC ARTHRITIS

The effects resulting from long continued joint strain, as well as some of the more acute injuries, are not always easy of differentiation from those produced by infection, and, unless we keep constantly in mind the possibility of traumatism being a frequent etiological factor, we are likely to err in our diagnosis and be disappointed in the end results of a misguided treatment.

*Traumatic arthritis* is most commonly encountered in those articulations which are subjected to weight bearing, and it is therefore not unusual to see patients who are suffering from foot strain, knee strain or strain of the sacroiliac or spinal

\*Read before a joint session of the Medical and Surgical Sections of the Ohio State Medical Association, during its 73rd Annual Meeting, at Columbus, May 8th, 1919.

joints who have been long subjected to treatment with the object of eliminating focal disease, when, in fact, septic foci had nothing to do with the joint disturbance. The promiscuous removal of tonsils and teeth, in hope of clearing up these conditions, is to be justly criticised, as it not only deprives the patient of more or less useful organs without benefit to the joint, but reflects discredit upon a legitimate procedure of removing suspected foci in cases of true infectious arthritis.

It is my contention, therefore, that all patients suffering from bone or joint affections should be subjected to a careful, painstaking examination and study before deciding upon the course of procedure most advisable in attempting to give relief. A *snap* diagnosis, without even removing the patient's clothing for examination, and advice to consult their dentist or the nose and throat specialist, in the hope that shifting the responsibility may result in the removal of some septic focus and magically relieve the joint systems, is reprehensible, to say the least.

Traumatic arthritis may simulate so closely that form produced by infection that it may be necessary, in many cases, to first eliminate joint strain as a factor before we can arrive at a positive diagnosis; it is necessary, therefore, to be able to recognize abnormal posture and familiarize ourselves with the proper methods of correcting faulty postures.

*Joint inflammation produced by acute sprains, contusions, displaced cartilages and hypertrophied synovial fringes are not so likely confused with infections if we take into consideration the history of direct and indirect injury, as the case may be, but we must not lose sight of the fact that it is not unusual to encounter a traumatic arthritis which follows an injury after an interval of free movement in the joint lasting from a few days to two weeks or more. The occurrence of the injury may have passed unnoticed or been forgotten and unless closely investigated our conclusions may be erroneous if this fact is overlooked.*

#### RELATION OF INJURY TO INFECTION

Metastatic joint infections following injury are not infrequently encountered, and are of special interest in those cases which come to litigation. The relation of trauma to infection where the presence of the latter is plainly evident, as set forth in the roentgenogram, is often the question at issue. It is not unlikely that the effect of the injury may lower the patient's resistance, permitting old foci to be lighted up, and with a favorable field for localization in the contused tissue, an infectious condition is added to that of trauma, which greatly prolongs the disability and often results in permanent joint changes.

#### METABOLIC DISTURBANCES

Metabolic disturbance as a factor in the production of inflammation must not be wholly discredited, although it has recently fallen into dis-

repute. While faulty metabolism may not often be the primary cause of bone and joint affections, there can be no question that it is capable of modifying the whole morbid process and influencing the progress of the disease as well as the treatment. It is not unlikely also that the ductless glands play an important role in the causation of certain joint disturbances through a faulty endocrinal balance which we are not as yet able to explain.

#### SEPTIC FOCI

The relation of septic foci to bone and joint diseases is firmly established. There are certain well defined types of inflammation which are undoubtedly due to metastatic infections which are transmitted through the blood or lymph channels from one or more septic foci elsewhere in the body; these may produce acute or chronic processes, the type being determined by the virulence as well as the morphology of the micro-organism. The acute type is well represented by such diseases as acute infectious arthritis and osteomyelitis, while the chronic type may take the form of degenerative or atrophic arthritis, proliferative or hypertrophic arthritis and that form so frequently seen affecting the spine, known as spondylitis deformans.

While it is well known that a great variety of micro-organisms are capable of attacking the joint tissues, it is the streptococcus with which we are especially interested, and which has received so much consideration and study of late years in this relation.

Dr. E. C. Rosenow has been able to produce by cultural methods, a range of transmutation from a type of streptococcus to the pneumococcus, and at different stages in the transmutation he has, at will, produced in the inoculated rabbit, suppurative arthritis, or in another phase, multiple proliferative arthritis, and, in another phase, an arthritis with proliferative and degenerative changes occurring in the joint at the same time, and in still another phase, a typical pneumonia. This would seem to explain the great diversity of joint lesions encountered which are at the present time considered secondary to focal disease. It is most likely that bacteria have a selective action and choose for their environment those tissues which are most suitable for their specific development.

In searching for septic foci, they will be found most frequently located in the head—the faucial tonsils, teeth, nasal sinuses and the middle ear are all capable of harboring circumscribed streptococcus abscesses, the products of which are taken up by the blood or lymph channels and distributed to various other organs of the body. It is also rational to believe that arthritis may be secondary to chronic appendicitis, cholecystitis, prostatitis or the chronic infections of the female adnexa. In many obscure cases it may be impossible to detect the original seat of infection;



it is my opinion that in some such instances the focal disease may be located within the deep lymphatic structures as the cervical, mediastinal or retroperitoneal lymph glands. It is also possible that when a joint is once infected, it may become a septic focus itself, from which other joints become infected, and thus the progress of the disease may go on unchecked even though all other possible foci are eliminated.

The size or location of septic foci bears no relation to the extent of involvement or the localization of the secondary infection in the bones or joints.

An apical abscess in a tooth may just as well produce an arthritis in the joints of the foot as any where else.

The size of the tonsils or the absence of a history of active disease in the tonsils or teeth does not eliminate these organs as possible foci of infection. I believe it justifiable, therefore, in every case of chronic infectious arthritis to make a complete X-ray examination of all teeth and have the tonsils removed whatever their appearance may be, if improvement can not be secured otherwise.

The time for investigation and treatment of focal infection, is, if possible, before permanent changes have taken place in the articulations. Patients who have suffered previous attacks and have recovered without permanent damage to the joints, should have the focus removed, if one can be discovered, to prevent the recurrence of other attacks. We can not reasonably expect the removal of focal disease to restore the damaged joint to a normal condition. While reinfection from the original source has an important bearing on the prognosis, removal of the focus is only one of the necessary steps in the treatment; we must not disregard, therefore, the necessity of careful attention to the articulation itself. Every inflamed joint should be put at rest in a suitable position to insure comfort to the patient and avoid deformity should an ankylosis ensue. Septic joints often require disinfection by arthotomy and lavage in order to prevent extension of the suppuration and disorganization of the joint structures. Improvement of the immunity by rest, personal hygiene and a cheerful environment are always indicated.

19 WEST SEVENTH STREET.

## The Pathological Conditions of the Teeth as Shown by X-Ray\*

Hugh J. Means, M. D., Columbus

**Editor's Note.**—It is being realized more and more that dental pathology plays an important role in the causation of arthritis. The initial tendency to blame infection about the teeth for all metastatic infections of joints is gradually giving away to a more circumspect attitude on the part of members of the medical and dental professions. At that oral sepsis is responsible for entirely too much ill health and chronic disease to be neglected. In using the X-ray for purposes of diagnosis it is essential that the radiologists be not only clever technicians in their work, but also good interpreters of the films they take. Radiographs may mean nothing and may mean everything. Raper of Indianapolis, an authority on the subject, finds himself checking up on his own work with many additional films in order to obviate the chances of missing an accurate diagnosis. In utilizing X-ray examinations the physician should, to protect himself and patient have the films taken by a radiologist who can measure up to the capacity of a consultant.

**D**ENTAL pathology, as it interests the physician, means the septic conditions found in and around the teeth. It has been long recognized that systemic disturbances are often the result of local infections. The discoveries of recent years have proven this and have also shown that infections apparently trivial and innocent may be the cause of serious general disease. It has also been found that the teeth and tonsils are the worst offenders, more especially the teeth.

### DENTAL PATHOLOGY

The more common septic conditions met with in the mouth are dental caries, pyorrhea alveolaris, and alveolar abscesses.

Pyorrhea alveolaris has several causes and is usually due to a combination of all or part of them. The commoner causes are micro-organisms, chronic irritation, unsanitary conditions of the mouth, and constitutional conditions which

increase the susceptibility of the gums to infection. The drainage is usually good and the effect of the ingestion of pus into the stomach is problematical. The so-called *pus pockets* or abscesses found at the apices of the roots are practically the same as alveolar abscesses and need not be considered separately.

Pyorrhea and alveolar abscesses are similar in that they are both of infectious origin and give off septic products. There is the same resemblance between an open ulcer and a deep abscess, but there is no question as to which is the more serious. In pyorrhea the drainage is usually good while the abscess is deep seated in hard bony tissue and even if drainage is present it is poor. Pyorrhea is usually plainly apparent, both to the dentist and physician and gives rise to symptoms which attract their early attention. Alveolar abscesses, as a rule, give rise to no symptoms, remain chronic or dormant for years, occur in the cleanest mouths and after the most careful dental work.

\*Read before a joint session of the Medical and Surgical Sections of the Ohio State Medical Association during its 73 annual meeting at Columbus, May 8, 1919.

The most frequent causes of alveolar abscesses are dental caries and dental work. After decay has reached the tooth pulp infection immediately follows and soon passes through the root canals forming an abscess at the apex. It may be stated positively that every untreated snag or root sooner or later will become abscessed. The greater number of abscesses follow dental work. By this is meant devitalization of a tooth and the sterilization and filling of the root canals for crowns or bridges. An alveolar abscess practically never occurs primarily on a vital tooth. If in treating the tooth an infected pulp or nerve is allowed to remain, an abscess is sure to result. If, on the other hand, too much zeal is shown by the dentist and canal fillings or potent drugs are forced through the apical foramen the periapical tissues are injured and with the lowered resistance infection may easily follow. This may account for the formation of abscesses on teeth, the root canals of which have been properly filled as the pastes usually contain formalin. In the past the aim of the dentist was to restore the visible portions of the teeth and the possibility of sepsis was overlooked. Today the dental profession is keenly awake to the subject and the prevention of sepsis is given first place. The problem of root canal fillings is given a great deal of attention in both dental journals and colleges. That abscesses occur in spite of the most careful work shows that the solution has not yet been found. This fact, however, is certain, that infections will occur in direct proportion to the care used in preparing the tooth.

The number of alveolar abscesses is very great. Statistics vary greatly depending upon the age of the patients examined and also whether the cases are selected or taken at random. The interpretation of the shadows on the X-ray film also varies the percentage as some observers classify as abscesses any abnormal area at the apex and others only those in which the diagnosis is unquestionable. It seems to be a conservative estimate, however, that between 40 and 50 per cent. of individuals with devitalized teeth will have one or more abscesses. The incidence of involvement varies with the individual. Many patients are seen with a number of dead teeth, the dental work having been done years before in the worst type of advertising offices with no attempt made to properly fill the root canals, and yet there is no evidence of abscess. Other patients have had their work done by competent dentists with the root canals properly treated and abscesses develop. While there are many such incidents, the percentage is small compared with the total number: in the vast majority of cases the incidence of abscesses depends upon whether the dental work was good or bad. It should be emphasized that all root canals should be filled to the tip if possible. This can usually be done but occasionally a canal is met with that is so small or tortuous that it cannot be filled. It is possible in

some cases to enlarge the canal but it is a slow, tedious process and is often omitted. Many times the canal ends a short distance from the end of the tooth and divides into a number of very small canaliculae, through which pass the nerve fibers and capillaries. It is manifestly impossible to thoroughly sterilize and fill these channels and yet the possibility of infection remains. Many of the progressive dentists and dental colleges are using the X-ray to check up every canal filling before proceeding with the final work.

#### INSIDIOUSNESS OF ALVEOLAR ABSCESS.

The danger of alveolar abscesses lies in the insidious mode of onset. Occasionally the abscess is acute beginning soon after the tooth is infected. This condition is local in character and makes its presence known promptly by the usual signs of inflammation. Again an abscess may be chronic for years and suddenly become acute. In either case the symptoms point direct to the trouble and if proper measures are taken, relief is usually prompt. Other abscesses are acute in the beginning and if allowed to run on become chronic. In these cases there is usually a discharging sinus and drainage being fair, little or no absorption takes place. The time honored *gum boil* is often the manifestation of such a condition being caused by the sinus opening becoming closed allowing the pus to collect under the soft tissues of the mouth. The usual course however, is a slow symptomless development. A very small quantity of puss accumulates at the apex of the root and enlarges slowly without making its presence known. There is a total absence of pain or discomfort and usually no tenderness. The size varies from an area so small as to be hardly visible up to that of a pea, although occasionally an abscess is met with as large as a five cent piece in the upper incisor region. Abscess may, after years of quiescence, suddenly develop into an acute stage.

#### X-RAY DIAGNOSIS.

The only positive means of diagnosis is the X-ray. The dentist can only see the visible part of a tooth and in the cases without symptoms positively cannot discover what is at the end of the root. Patients with suspected focal infections should by all means be sent to the dentist but not in the manner usually followed. The physician refers his patients to the dentist to have the teeth looked over. If the dentist is at all busy several days usually elapse before the patient can get an appointment. The teeth are then carefully examined, nothing found from external appearances and the patient is sent to a roentgenologist. The X-ray examination is made, one or more abscesses are discovered and the patient is sent back to the dentist. Another delay follows until an appointment can be made. A great deal of wasted time and lost motion results and many patients resent so much running back and forth.





Roentgenograms illustrating pathological conditions of the teeth as shown by the X-ray.

The physician should first refer the patient for an X-ray examination. If pathology is found the report goes with the patient and the dentist can come to an immediate conclusion. Too often in these cases, probably in order to save the patient expense, the dentist specifies certain teeth to be X-rayed, that to him appear suspicious and omit others that are dead or contain large fillings because they seem normal from the outside. Many times the teeth specified are negative and one or more abscesses are found on the others. The only safe procedure is to examine every large filling, crown or bridge. The individual dentist or physician sees only his own cases while the dental roentgenologist does work for a number of men and should be more competent to judge from his larger experience which teeth should be rayed. The importance of good X-ray negatives cannot be over emphasized. There is no branch of roentgenology that requires so much care and attention to detail as the production of good dental X-ray films. A poor negative is worse than useless as it makes diagnosis impossible and will cause pathological conditions to be overlooked. The question of interpretation presupposes not only a knowledge of ordinary roentgen diagnosis but also a familiarity with the fundamental principles of dental anatomy and pathology. It is immaterial whether the interpretation is made by the roentgenologist, physician or dentist provided he has sufficient experience.

#### METASTATIC INFECTION

The most important way in which infection from oral sepsis spreads is by metastatic infection through the blood and lymph channels. This is greatly facilitated by the peculiar character of alveolar abscesses. First the abscess lacks drainage. Second, it is situated in bone which admits of no expansion, consequently the pus is under pressure and the pressure increases with the quantity. Third, the alveolar tissue is very vascular, permitting of prompt absorption, and being bone cannot easily throw out a connective tissue dam. Fourth, every movement of the jaws in mastication exerts a pressure of several ounces on the tooth, and forces it into the socket similar to a piston in a pump, transmitting the pressure to the abscess contents. This movement of the tooth is slight but certain, and the aggregate in twenty-four hours is considerable.

It would seem that the constant discharge of infectious material into the system would soon result in general septicaemia. The human organism, however, soon acquires an immunity to chronic infections, and, under normal conditions, can keep them localized. It is during periods of lowered resistance that the infection becomes general; usually from such conditions as anaemia, diabetes, pregnancy, traumas, fatigue, alcoholic excess, exposure, infections and many others.

#### INFECTIVE ORGANISMS

Many different organisms are found in alveolar abscesses, but the most constant is the streptococcus viridans. A large amount of investigation has been done on the streptococcus group and certain general principles seem to be established. A large number of diseases are caused by streptococci. Streptococci acquire an affinity for a given tissue and are not likely to invade others. Streptococci from the primary focus in nonspecialized tissues such as alveolar abscesses and infected tonsils may be changed in their nature and affinities and invade other types of tissues. Practically every disease having its origin from the pus forming organisms may result from oral sepsis. Among the most common may be mentioned rheumatic fever, arthritis both acute and chronic, neuritis, heart infections, nephritis, gastric and duodenal ulcer, bone infections and many others. At the present time it is common knowledge of the physician, dentist and laity that arthritis and neuritis result from infected teeth. It is not recognized by the majority of both professions that many other more serious conditions may have their origin from the same source.

It is easily seen how diseases of infectious origin can originate from infected teeth. There are a number of functional disorders however, which are either caused directly or at least affected by oral sepsis. Such conditions as nervousness, malaise, dizziness, drowsiness, weakness, fatigue and headache are often caused by chronic infections.

The organisms usually met in oral sepsis do not form a true toxin so that the toxic effect must be explained in another way. Protein sensitization offers the most logical explanation. Protein sensitization has a wide range, from articles of food such as strawberries and eggs, plants, pollens and animal odors to bacterial toxins. Fortunately bacterial proteins usually do not produce a high degree of sensitization and this fact may explain the long duration of many cases of oral sepsis without symptoms. It would seem that the toxic effect of a given infection would vary with the sensitization of the individual, the tolerance acquired and the regularity with which the organisms entered the system. In many cases in which the patient has had an alveolar abscess for years without symptoms a tolerance has undoubtedly been acquired. The abscess becoming acute or a new one forming throws a larger amount of toxin into the system and a more or less severe reaction follows. The cause of all functional disorders cannot be blamed on oral sepsis but it is certain that infectious products from chronic sources of dental infection cannot help but add to and stimulate other diseases.

Headaches, earaches, and facial neuralgias often result from dental pathology. Their cause may be an alveolar abscess, toothache, sinusitis or on impacted tooth. Impacted teeth occur very frequently and are usually overlooked. The lower



third molars are the worst offenders and are often found growing at right angles to the one in front. It is easy to see that the constant pressure from an impacted tooth may give rise to a considerable local disturbance.

#### TREATMENT

The treatment of oral sepsis should be left to the dentist. In abscessed teeth extraction is usually the method of choice, but in early cases proper treatment will often accomplish a cure and save the tooth. Too often the physician without proper investigation sends the patient to the dentist with the instructions to extract a number of teeth and often all of them. This is resented by the dental profession as experience has shown that many dead teeth are healthy and the patient, by an arbitrary decision of his physician, is condemned to lose teeth that would give good service for many years. Instead of following the physician's instructions the dentist refers the patient for an X-ray examination and only extracts the teeth which are shown to be infected.

The X-ray holds first place in the diagnosis of septic conditions of the mouth. The blind abscesses which give no sign of their presence can be demonstrated in no other way. In chronic abscesses with a discharging sinus and pyorrhea the X-ray will give information as to the size and involvement of surrounding tissues which can be determined in no other manner. Every patient suffering from any of the chronic systemic disturbances or any infection of streptococci or staphylococcal origin should have a dental X-ray examination. Dental infections are so prevalent that no one has a right to say the teeth show no pathology without first using the X-ray which is the only certain method of diagnosis.

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*Benzyl Benzoate for Therapeutic Use*—Van Dyke and Co.—A brand of benzyl benzoate which complies with N. N. R. standards. For a discussion of the actions, uses and dosage, see New and Nonofficial Remedies, 1919, p. 53. Van Dyke and Co., New York.

*Sajodin*.—Calcium moniodobehenate—The calcium salt of moniodobehenic acid. Sajodin is used as a substitute for iodides. The iodine of sajodin, being longer retained, is perhaps better utilized. It is also less liable to produce gastric disturbances than alkali iodines. Winthrop Chemical Co., Inc., New York (*Jour. A. M. A.*, Dec. 27, 1919, p. 1939).

*Chlorcosane (McNeil)*—A brand of chlorocane containing from 35 to 40 per cent. of chlorine in stable (nonactive) combination. (For a discussion of the properties and uses of chlorocane see New and Nonofficial Remedies, 1919, p. 137.) Robert McNeil, Philadelphia, Pa.

*Luminal, Phenobarbital, Phenyl, Ethyl, Barbituric Acid—Pheynl, Ethyl, Malonyl, Urea, Phenobarbital (luminal)* differs from barbitol (veronal) in that one ethyl group has been replaced by one phenyl group. It is claimed that the introduction of the phenyl group increases the hypnotic power of luminal over that of barbitol. Luminal is claimed to be a useful hypnotic in nervous insomnia and condition of excitement of the nervous system. Dose, from 0.2 to 0.3 gm., increased if necessary to 0.8 gm. Luminal is supplied in powder and as luminal tablets 1½ grain. Winthrop Chemical Co., Inc., New York.

# Streptococcus Viridans Infections of the Mouth and Throat with Reference to Neuritis and Arthritis\*

Charles H. Hay, M. D., Cleveland

**Editor's Note.**—In Dr. Hay's experience the streptococcus viridans plays a very important role in the etiology of neuritis and arthritis, which are not accompanied with swelling and fever, a feature of differential diagnostic importance. While the tonsils and sinuses are frequently the seat of infection, it must also be emphasized that the teeth and gums are just as apt to harbor the foci. In consequence X-ray examinations and cultures are imperatively demanded in all cases. Granted the elimination of the source of toxemia an autogenous vaccine of the cultured streptococcus viridans, in Dr. Hay's cases, has given markedly beneficial results.

**T**HE object of this paper is to call your attention to the importance of a thorough search for the focus of infection in the buccal cavity of patients presenting themselves complaining of neuritis, and cases of arthritis, which are not accompanied with swelling and fever.

When a patient comes complaining of neuritis, arthritis, or any serious disease of any organ or tissue, such as heart, joints, kidneys, muscles, or the nervous system, we should exhaust every means of diagnosis to determine if the cause lies within the mouth.

One cannot tell by mere inspection of the teeth and tonsils if they are infected. It is necessary to have an X-ray of the teeth and to make a culture from the tonsil crypts. The X-ray of the teeth may show a single small area of infection which will be easily overlooked by the casual observer, *but as the streptococcus-viridans germ does not produce gas or pus, there is no pressure at the apex and the tooth is not painful.* There need be no discoloration of the gums.

If the area of infection is small and active the production of chemical toxins will be large. Owing to the extensive arrangement of the lymphatics of the mouth, the absorption will be rapid, causing the most severe systemic symptoms, and vice versa, a large area of infection may be latent.

Again an X-ray may show no definite areas of infection but the outlines of the teeth may be roughened or blurred, especially in elderly people. A culture from these roughened surfaces most always shows a streptococcus-viridans infection.

## DANGERS OF DEVITALIZATION.

The dentists appreciate, but dimly, the evils following devitalization of teeth to secure improved mastication. Systemic infections following recessions and separations of the gums, pyorrhoea pockets, capped teeth, and pivot teeth have received little or no consideration. Apical infections and serious disease will follow oral sepsis caused by artificial dental procedure which is designed to improve mastication.

Despite the earnest efforts of a few of the

medical and dental profession, the vast majority of the physicians and dentists are prone to remain apathetic to the vital importance of the prompt detection and removal of all septic foci in the mouth. It is certain that in the very near future more attention will be given to the importance of these septic foci as the cause of neuritis, arthritis, ill health, serious or fatal disease.

The etiology, diagnosis, and treatment of septic foci in the mouth is a problem belonging to the physician, and his ability to handle these infections is going to be an added service to mankind, and it will make this branch of medicine one of the most important specialties. What is most needed at the present time is more knowledge on the cause and treatment of apical infections and additional signs for an early diagnosis, and means for preventing systemic invasion.

## CAUSES OF MOUTH INFECTION

The most fruitful and local causes of mouth infections are improper mastication and inefficient daily cleansing of the teeth. Nearly all infections are traced to these two causes. Other causes are ill fitting crowns and bridges, dental decay, and infection of dead dental pulps. There is the impaction of food between the teeth, with the consequent bruising of the gums that protects the roots. The bone between the teeth becomes exposed and infected. It then becomes absorbed and leaves a hole that cannot be properly cleaned, and this pocket becomes an ever spreading focus of infection. Later the membrane supporting the tooth breaks down and the infection burrows deeper and deeper until the nerve and blood vessels at the tip are destroyed. Thus another depot of infection is formed that can only be eliminated by boring into the tooth and sterilizing it or extracting it.

## METHODS OF TREATMENT

First the cause of all systemic infections should be eliminated. The patient should receive a thorough general examination in order that the depots of infection may be revealed and destroyed. The teeth and tonsils should be carefully examined. Every patient will remind you that they have had no trouble with the teeth, or that they have just come from the dentist, and will be surprised when you ask to see the teeth. Around

\*Read before a joint session of the Medical and Surgical Sections of the Ohio State Medical Association during its 73rd Annual Meeting at Columbus, May 8th, 1919.



the teeth at the gum line will be seen small hard deposits. These cannot be brushed away. The patient should be sent to a dentist with definite instructions to have the teeth thoroughly cleaned and these deposits removed even below the gum line. Many dentists do not understand the seriousness of mouth infections and give the teeth *the once over*, which is not enough. A culture from these deposits will often show the streptococcus-*viridans* germ present. Bridges, crowns, pivot teeth and all large fillings should be X-rayed.

Ill fitting crowns, bridges, and overhanging fillings are mere catch basins for food and cannot be properly cleaned. It is much better to sacrifice even good teeth than to let one of these depots of infection remain in the mouth of these patients, although it is unfortunate that any good teeth should be removed for the lack of proper scientific diagnosis and treatment.

Many times these sufferers have had all their teeth extracted before coming to us, and they still have pain. If a thorough search reveals no focus of infection, the gums should be X-rayed for infected roots which might have been left behind at the time of extraction and a focus is frequently found there.

With me it is routine to have the teeth X-rayed, a culture taken, and a vaccine made from all infections of patients suffering from neuritis and arthritis. When the teeth give a negative finding I seek farther for the infection. The tonsils, due to their crypts and histology, harbor the infection more frequently than any organ of the body.

#### ILLUSTRATIVE CASES.

Let me present the following representative cases from my private records.

*Case No. 1.* A college student, twenty years old, came to me in Oct. '16, complaining of rapidly becoming blind in both eyes. He first noticed this about a week before, and since then he had been losing his eyesight so rapidly that now he could hardly see well enough to walk alone on the street. Past history was of no importance.

An oculist reported to me that the loss of vision was due to neuritis of the optic nerves of unknown origin. An X-ray of his teeth showed an apical infection of the second left, lower molar. A few years ago this tooth was filled with a large gold filling, and had caused him no trouble since. A culture showed the streptococcus-*viridans* infection. A vaccine was made and in less than three weeks he was able to return to his studies. Owing to the amount of destruction of the optic nerve from neuritis, a few black spots still remain in the field of vision.

*Case No. 2.* Mr. B., aged 33, single, a moulder by trade. In Sept. '13 began having sciatic neuritis. After a few days this pain became so severe that he could not go to work. In spite of what was being done for him he continued getting worse, more nerves becoming involved and the

pain getting more severe. This condition continued until April '14, when I first saw him. At this time his suffering was so bad that he could not move and it caused him great discomfort to be moved.

He was anaemic, emaciated, and his facial expression was that of a man suffering intense pain. His mouth showed that he seldom used a tooth brush. His teeth were matted with putrid food remains, and were caked with tarter deposits, and there was a marked recession of the gums. He had no fillings and no cavities, and his teeth caused him no pain. His heart was enlarged to the right and left, and both tones rough, the second greatly accentuated. Abdomen negative. Urine examination; sp. gr. 1020, acid, cloudy, no sugar. Albumin, five per cent. centrifugally. Microscopic examination. Many pus cells, hyaline and granular casts. Quantity not increased. Nearly every nerve outside the brain and cord was painful on pressure and it was necessary to give him morphine frequently.

At this time X-ray was impossible. For treatment his teeth were cleaned and he was taught to keep them clean. He was given a tonic and liberal diet, with plenty of liquids.

In a week he was so much better that he required no morphine. In another week he was able to be up in a chair. Early in May all his teeth were extracted. There were no cavities and no fillings, but they had the characteristic roughness, and many roots were absorbed. From these rough surfaces the streptococcus-*viridans* germ was found, and a vaccine was made.

He improved so rapidly that in a few weeks he was able to walk with the aid of a cane. His urine showed no trace of albumin and there were only a few hyaline casts.

In July he discarded his cane and was able to do light work and he gained rapidly in weight. In August he returned to his regular work as a moulder.

The fifth of November he worked in a cold rain for a half day, when he contracted pneumonia and died Nov. 12, '14.

The streptococcus-*viridans* infection of the teeth was the primary source of infection. The neuritis, arthritis, nephritis, pyelitis, and endocarditis were secondary. Had this been recognized early enough his discomfort and life might have been spared.

*Case No. 3.* Mrs. W., aged 58, widow. Previous history negative. I saw her in Jan. '17 when she was complaining of severe pain in the ball of her foot. Personal history. About four years ago she first noticed severe pain in her back and running down the back of her leg. She received the usual treatment for lumbago and sciatica, with very little relief. The pain usually wearing out, as she would say. During the past two years she had frequent attacks of lumbago and sciatic

neuritis, which became more severe and confining her to bed at times.

Her mouth showed some bad roots and pyorrhoea. X-ray of the teeth showed two apical infections.

The infected teeth and the roots were extracted, a culture showed the streptococcus-*viridans* infection. After a few doses of the vaccine the pain was gone.

In August '17 she returned complaining of another attack of sciatic neuritis. Needless to say she was discouraged. Nothing abnormal in the gums was found, so a tonsil culture was made. This showed the presence of the streptococcus-*viridans* germ and a vaccine was made. Administration of this gave her very little relief, so I persuaded her to have the gums X-rayed. An infected root was found, which had been left behind at the time of extraction. This was removed and the culture showed the streptococcus-*viridans* organism. A vaccine was made from this and her improvement was rapid. Up to the present time she has had no recurrence.

*Case No. 4.* Mr. D., Clerk, came to see me in Oct., '17 complaining of sciatic neuritis and lumbago. He said he had been subject to this for more than two years, and lately it is getting more severe and the attacks coming after riding in an automobile in a cold wind. His doctor told him it was the *automobile neuritis*. Medicine gave him little relief.

An X-ray showed his teeth free from foci of infections, so a culture was taken from the tonsils, which showed the presence of a streptococcus-*viridans* infection. An autogenous vaccine gave him immediate relief. His tonsils were not removed, and an X-Ray of his teeth nine months later showed five infected teeth. It might be interesting to know if the tooth infection was secondary to the tonsil involvement.

*Case No. 6.* Miss B., aged 13, school girl. Gave wife. Past history negative. Patient came to me in Sept. '17 complaining of severe pain in right shoulder joint, and was unable to raise her right arm. Present illness began about three weeks ago. She was working in her garden in the evening, using a heavy pick to loosen the dirt. It was quite cool and she became overheated and perspired freely. The next morning when she awoke she could not move her arm on account of the pain in her shoulder. She went to her physician and after three weeks treatment she was no better.

An X-ray of the teeth showed several apical infections. A culture showed the streptococcus-*viridans*, and a vaccine was made. After a few injections she was entirely relieved.

*Case No. 6.* Miss B., aged 13, school girl. Gave a history as follows: In Dec. '15 first noticed a severe pain in right hip. At this time she was living in Pittsburgh. She consulted her family physician, who told her she had a sciatic neuritis. This pain soon involved the entire right limb and extended to the posterior lumbar nerves and those

of the pelvis. About this time she developed a sensory and motor paralysis of this leg below the knee. The pain was so severe that she required morphine at frequent intervals. This condition continued over three months and then began subsiding slowly. With the use of electricity the paralysis improved a little.

In March '16 she had a second attack, not as severe as the first, and not as much pain. At this time the physician told her that she had a kidney lesion and that her heart was affected. She remained in bed until May when she came to Cleveland to live with her sister.

Soon after her arrival here she had another attack of pain, and I was called to see her.

Examination was as follows:—Badly emaciated, having lost twenty pounds in weight, very anaemic, haemoglobin 60 per cent., temperature about 100 in the evening. Teeth negative and tonsils slightly red but small. Anterior pillars quite red. Heart slightly enlarged to left and right, tones rough, no murmurs heard, irregular beats. The neuritis involved the posterior lumbar nerve roots, the crural nerves, the nerves of the pelvis, and the right sciatic nerve in its entire length. She had a complete paralysis of the entire right leg and a tactile and motor paralysis below the knee. Morphine was necessary. Urine cloudy, sp. gr. 1018, albumin 5 per cent. centrifugally. Microscopic examination. Much pus and many hyaline and granular casts.

Tonsil culture showed a streptococcus-*viridans* infection. A vaccine was made and in two weeks the patient was free from pain. The urine became clear, and the albumin much less, but has not entirely disappeared at this writing. She has a few hyaline casts present, but no pus. With the aid of electricity she recovered from most of her paralysis, and walks with the aid of a brace. Her tonsils were removed and she has had no recurrence.

*Case No. 7.* Mrs. M., aged 29, married, housewife. Family history negative, came to see me early in '18. Personal history as follows: In Sept. '17 she first noticed occipital headaches. These getting more severe until they became continuous head-pains radiating from the occiput over the entire head. She had neuritis of the nerves of both sides of the face, and cervical region extending the entire length of both arms. In the morning her hands were so stiff and sore that it would be a couple hours before she could use them. For three months she had noticed a severe pain, sharp in character, over her forehead, more severe on the left side. She had been to several physicians and had X-ray plates of both the teeth and sinuses. Both were reported negative. Eye examination was reported negative.

Examination; neuritis as above mentioned. X-ray of sinuses was negative. Second X-ray of teeth showed two apical infections, and right up-



per third molar with a large cavity; none gave her any discomfort.

A culture of the infected teeth showed a streptococcus-*viridans* infection. A vaccine gave her relief from her neuritis and the pain and stiffness in her hands. She still had pain in her forehead and purulent discharge from her right nostril. An exploratory puncture of her right maxillary sinus revealed an old sinusitis that was not shown in the X-ray. She went to a hospital and the sinus was irrigated daily for two weeks without any marked improvement. Finally this third molar was extracted and the sinus cleared up immediately.

Her head pains gradually disappeared and she left the hospital free from all pain and discomfort.

*Case No. 8.* Miss G., aged 38, nurse. I first saw this girl when in one of the New York hospitals Aug. '16. She gave the history of having had sciatic neuritis for ten years. It was so painful at times that she was compelled to remain from duty as long as a month at a time. All treatment employed was of little value to her. When a girl she had very bad teeth and at the age of twenty she had them all extracted, and wore two well fitting plates.

I made a culture of her tonsils and found the streptococcus-*viridans* germ. A vaccine was made and she was immunized and after which her tonsils were removed. She remained free from pain though she still had a numbness of this leg below the knee.

In March '18 when I was in New York she was suffering with neuritis of the same leg and was confined to her bed. The pain was the same in character as before and much more severe.

X-ray of the gums were taken, and in front in the lower jaw were two places which looked as if they might be foci of infection. She was given an anaesthetic and these were opened and curetted, a culture was made, which showed the streptococcus-*viridans* germ. In one a piece of tooth was found. A vaccine was made and after the fourth injection she was free from pain. Up to this writing she has remained cured.

*Case No. 9.* Mr. E., aged 24, single, moulder. Came to me in July '18 suffering from pain in his right shoulder and his back, extending over the cervical and thoracic nerve roots. He had this several times and medicine gave him no relief. Six months ago he had a sciatic neuritis which kept him in bed a month.

Examination of the teeth showed no cavities and no fillings. He always used a tooth brush and his teeth were as clean as could be expected. All around the teeth were hard deposits which extended below the gum lines. Tonsil culture was negative.

These deposits were thoroughly removed and his teeth cleaned, a culture was made which showed the streptococcus-*viridans* germ present. A vaccine gave him immediate relief.

#### SUMMARY

1. It is probably safe to say that lumbago, neuritis, arthritis (without swelling and fever), are merely symptoms of systemic invasion of the chemical toxins produced by a focus of infection, usually the streptococcus-*viridans* germ.

2. The streptococcus-*viridans* infection is located at the apex of a tooth, or around a tooth where there is pyorrhoea, or in the tonsil crypts, most frequently in the order named.

3. The focus of infection may remain latent for months or years, then after the lowering of resistance, or exposure to cold, may become active and cause the most profound and distressing symptoms, with little or complete destruction of any of the organs attacked.

4. A tooth can have an active apical infection, causing the most painful neuritis of any or all the nerves outside the brain and cord, and the patient will have no discomfort from that tooth, and there need be no discoloration of the gums.

5. Up to the present time I have not failed to clear up neuritis or arthritis, caused by streptococcus-*viridans* infection, in crypts of the tonsils, the teeth not being involved by fully immunizing the patient. If there is an active apical infection, it will not clear up until these foci are removed before immunizing the patient.

6. I have treated over five hundred patients and will say that this treatment has been eminently satisfactory and the recoveries very rapid and complete, only a few not responding.

7. Complications may be many. I have seen pyelitis of many different organs with fatal results; endocarditis with enlargement and loss of compensation; painful joints without swelling and fever, and complete motor and sensory paralysis, remaining permanent. Nephritis is very common.

8. The complications are caused by the absorption of chemical toxins, rather than by the bacteriemia.

9. In my opinion, no single drug or vaccine can eliminate mouth infection when it is once entrenched. It can only be cured by the judicious surgeon, who must determine just what surgical and therapeutic procedures will be effective. Any specific claim for surgery, vaccine, or drugs alone, will certainly retard, not advance the cure of mouth infections.

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#### DISCUSSION

DR. WILLIAM D. HAINES, (CINCINNATI): I think this easily the most important lesson that we will take home with us from the Ohio State Medical meeting this year. The subject of focal infection is not new. As long ago as 1873 two Italian physicians hit on this same theory. Bolton, of England, whose work you will see in the museum, went on to produce not only the round perforating ulcer, but enormous perforations in animal experimentation. Then there seemed to be a little lagging in the subject and Rosenow of this coun-

try took it up and began making specific applications. Steinhart, of Cincinnati, has likewise done a lot of work along this line.

Now we realize that we have been dealing with terminal infection. Appendicitis, gall-bladder infections and various lesions of that kind, that have fallen into the domain of surgery, have received wonderful treatment and we have developed a very high degree of technique in surgery that is remarkable, but we have been shooting over the mark, we have not been getting down to our specific infection, that is the cause of the terminal infection, which has been shown so well today.

Just a word in reference to team-work. I fear that those of you who live in country districts and smaller places will go home discouraged. Don't do it, boys. Go home with a firm determination to master this thing. You hear about this team-work. Now let us not make the team-work too hard upon the public. We must be doctors first and specialists afterwards.

We heard yesterday about how to create a specialist. I have long ago said, and I repeat it again, God pity the institution that creates specialists. Specialists must create themselves.

So, when you go out, you are a doctor. You ought to know how to write a history, how to correlate the facts as you get them. You know how to look through a microscope, how to test for albumin. It may be that in some of the more occult tests of the stomach and bowels, and blood examinations, you may require laboratory help, but you can work out these tests with the aid of clinicians.

Not long ago a very prominent Rabbi in my city came to the President of the Academy of Medicine and complained very bitterly that his daughter had been sent down town relative to getting her eyes examined, and when she arrived home she had seen nine physicians and there had been a crimp put in the bank-roll, that didn't straighten out for several months. Now this team-work is all right, but you mustn't work the public too hard.

But do not be discouraged relative to this matter. The principles are brought out in every Association meeting that you attend, if you will only take them home with you; and if you don't get your dentist to do the type of work that is up to standard, get a good pair of forceps and follow the example of the old time dentist, who, when there was anything at all wrong with the tooth, be it toothache, apical canal infection, root abscess, pyorrhoëa alveolaris, or what not, he submitted that tooth to a specimen jar for further reference. That is the thing that will cure this type of work, and the local treatment does not.

DR. WARNER (COLUMBUS, O.): There is not much that I could add to what has already been said. A fine lesson has certainly been taught us this morning. I have enjoyed especially Dr. Hay's discussion, and I know that he would have been

glad to have touched upon other things besides the teeth as elements of focal infection. There are many other points of focal infection that we must regard with reference to producing disturbances elsewhere in the body.

I wish to make a point about the use of vaccines for the cure of or for their influence on these different infections. We may use them as a last resort, but we should try most especially to get rid of the original cause, if it is possible for us to do so. Then, we may try to get rid of the effects of infection by use of a vaccine, an autogenous vaccine, if possible, and if you have time to make it. If the conditions are such as force you to make use of a polyvalent vaccine, it will give you a lesser degree of influence. But it has been my experience with the use of vaccines, that even with the autogenous vaccines in some cases you get splendid results and in others no results at all. However, that does not preclude our making use of the vaccines, because one cannot tell in any given case, preceding its use, just what its influence will be.

But finally, in all of these cases let us try to remember that any focal infection responds more readily to treatment if we get at the bottom of it and give it drainage; not forgetting drainage as the principal treatment in all focal infections.

DR. DRYER (CINCINNATI, O.): I have always envied the older men when they speak of their twenty or thirty years of observation. One of these observations which I think of today extended back to the old swimming hole—and that is nearly forty years ago—when a friend of mine, a boy, used to go swimming with us. All of the boys noticed that he had a rough, dry, scaly skin. We always called it *fish skin*. The boy was very healthy, in fact, the best athlete in our crowd. Some five years ago he was attacked with a series of carbuncles that very seriously affected his health. He had a surgeon excising them and operating on him for an entire year. Finally I suggested to him one evening that he have his teeth X-rayed. He did so and two teeth were found infected and they were removed. He is now perfectly clear from further trouble and his skin has become smooth and as clear as a baby's. That is an observation that is forty years long.

Just one observation. As an industrial surgeon, it is rather interesting to watch the two type mouths of men that come before you: those that have been thoroughly "Klondiked"—to use the expression which one gentleman used here—and are full of fillings, which have been carefully attended to by the dentist; and those that have never had any attention at all. I believe it is experience of industrial physicians that those men who have never had any dental attention have very few foci, compared with those who have had a great deal of bad dentistry.

Following Dr. Hay, and in line with what



was said the other night, in the matter of group diagnosis we must find some way by which this group diagnosis may be established on an economic basis, both for the physician and the patient. There were suggestions thrown out in connection with the discussion on social insurance to the effect that if we get vigorously behind the pursuance of the purposes of the Hughes Bill it will finally produce some of the group clinics that we so much need. The furtherance of that project will put off the day when we need to fear social insurance.

DR. CHARLES H. HAY (CLEVELAND, O.): I would like to say just one thing in closing and that is this: That it is not the big things that clear up the focus of infection. It is looking after the things that are so often overlooked. For instance, just the mere lodging of a food particle between

the teeth, where dental work has caused the space to be filled up, can cause a terrific neuritis or arthritis; and a person doesn't have to go to work and have an X-ray made or have a specialist make a diagnosis, or a culture taken, because patients can take a piece of thread and clean their teeth, and if they respond to this treatment and get better, all is well and good—if not, you can seek further. Then again those who have had a neuritis are very susceptible to this infection and they will relapse, unless they clean their teeth with a thread twice daily. Food pockets and calcareous deposits are bound to be always present and this debris will become infected with the streptococcus-*viridans* germ and a reabsorption is the result. This can be very easily removed by the judicious use of dental floss or by a dentist.

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## The Murphy Treatment of Acute Arthritis\*

Carl DaCosta Hoy, A. M., M. D., F. A. C. S., Columbus

Editor's Note.—When metastatic arthritis affects one or more of the larger joints the Murphy treatment, according to Dr. Hoy, becomes a valuable method of therapy. Metastatic arthritis follows focal infections, elsewhere in the body, and also such diseases as influenza, typhoid, and pneumonia. The incubation period differs for each variety of bacterial invasion. Joint symptoms may appear within 24 to 48 hours after primary streptococcal infection. The Murphy treatment of acute metastatic arthritis in the large joint calls for aspiration, Buck's extension and the injection of formalin-glycerine solution aided by the administration of autogenous vaccines. Joints must be kept at rest during the inflammatory period. Dr. Hoy gives details of the technique and its beneficial effects.

**N**O branch of surgery is so grossly neglected or so badly mismanaged by the surgeon, as that of joints and the evil results seen every day prove this statement. The cases, which in the past have been most perplexing to the physician, as well as the surgeon, have been joint lesions, especially those of Acute Metastatic Arthritis, judiciously treated with the expectancy of beneficial results.

The diagnosis, itself, in these types of lesions is a matter of simplicity. How many physicians and surgeons after a correct diagnosis have absolutely failed in securing a salutary result? While the experiences of the past have been in a large measure discouraging the recent advances made in experimentation and research work as well as the results made in the timely treatment and the management of this class of cases have unquestionably demonstrated that we have arrived at a period in the management of joint infections, whereby results are obtainable which a few years ago were regarded as uncertain and hopeless.

### WHAT IS ARTHRITIS?

By this term we mean not only an inflammation of the synovial membrane but also of the other structures composing and surrounding the joint. As to the etiology we do not intend to go into detail. With the exception of trauma in acute cases, all arthritides are due to a secondary metastatic infection. It is respiratory, gastro-intestinal,

genito-urinary, epidermal or osseous or mucuous, and passes in one or the other channels, through the blood or lymph or both, to the joint as a metastatic infection, and has just as definite a period of incubation as typhoid or measles.

In the great majority of metastatic infections the primary focus can be definitely located, elsewhere in the body, most frequently in the mouth. Before we begin to study these infections from the standpoint of metastases, no record was made of the cold or sore throat or the tonsillitis or the pyorrhoea, the abscessed tooth, the dysentery or the gastro-intestinal infection that preceded the attack of arthritis or the so-called rheumatism two or three weeks previous. Why? Because we failed to connect the primary infection with the secondary arthritis, and the lapse of time between the subsidence of the primary infection and the appearance of the secondary manifestations, is usually long in the average infection except the streptococcal type and it led us to overlook the fact that arthritis is a metastatic infection, easily recognisable and demonstrated following some primary infection of some mucous membrane as a rule. The pharynx is the most common seat of the primary infection. Next the tonsil, next in order naso-pharynx the accessory nasal sinuses, teeth and gums, the infections of bronchial-mucosa, infections of the lower part of the intestinal tracts, colitis, appendicitis, enteritis and gall bladder infections, genito-urinary infections

and so on. It is rather surprising that the profession failed for so many years to connect the secondary infections in the joints with the primary infections of mucous membrane and elsewhere, when for many years we have recognized the relation between the primary urethral infection and the secondary articular infections of the Neisserian type. The reason we always connected this, was that the patient did not get over the urethral discharge before his joints became involved. The metastatic infection of the Neisserian type occurs as a rule between the 18th and 24th day after a primary urethral infection. The pure streptococcal variety occurs within 24 to 48 hours after the appearance of primary infection. In coryzal or influenzal type the incubation period is 10 to 15 days. Scarletinal infections occur 11 to 16 days after the onset of symptoms. Typhoid infections in from four to eight weeks and pneumococcal 10 to 16 days after onset that is in the period of pulmonary lysis. The colon infections occur 48 to 72 hours later. Most commonly associated with the joint infections are trauma and exposure.

#### THE PATHOLOGY

The factors of destruction of tissue in infection of the joints are similar to those causing destruction in other tissue infections, with the exception of the variations in vascularity in the synovial membrane and the comparative absence of vascularity in the fibrous capsule. They may be enumerated as follows:

1. Virulence of the microorganisms producing the infection.
2. The minus resistance of the patient.
3. Retention of infection products or pus under pressure, causing ischemia of the synovial surface thus favoring the biotic and toxic necrotizing effect of the microorganisms.
4. The intra-articular pressure of the inflamed joint surfaces by the involuntary muscular contraction in its effort to immobilize the inflamed and painful joint.

There are only two tissues in and at the joint that are the seats of primary infection, whether traumatic or hematogenous, and these are the synovial membrane and the bone. The cartilage and fibrous capsule are never the seats of primary infection. In the traumatic cases penetrations, punctures, etc., the infection is of the subendothelial layer after the endothelial cells have been destroyed by trauma or erosion. The hematogenous infections of the joints never take place on the synovial surface, but in the capillary and lymph layers of the synovial membrane, always beneath the endothelial layer. In the infections of the joint either synovial or osseous, effusion takes place in the joints from the periarticular infarcts, long before microorganisms appear on the synovial surface or in the fluid.

#### TREATMENT

The treatment of acute metastatic articular

arthritis, in the large joints should consist of:

1. Relief of the tension, by aspiration.
2. Relief of the intra-articular pressure, by Buck's extension.
3. Neutralization of the infection and the production of local immunity through injection of 2 per cent. formalin in glycerine.
4. Administration of vaccines, autogenous, preferably.
5. Avoidance of luxations and deformities during inflammatory activity.
6. Removal of focus of infection.

We will only speak of the surgical treatment and will not take up the medical treatment or the use of vaccines.

#### TIME FOR INJECTION

In acute cases, as soon as you get them, the treatment should be instituted immediately, if the best results are to be obtained. Remember no treatment will restore structures already destroyed by infection. Timely treatment is best, because at the beginning there is only an active hyperemia of the synovial membrane of the joint, with an exudation of serum and no erosion of the synovial-membrane or articular cartilages and no deformity or ankylosis. This is before the surfaces are agglutinated or destroyed.

#### PREPARATION OF PATIENT

The injection is best done under nitrous oxide and oxygen or ether anesthesia. A hypo of morphine 1/6 grain and atropine grains 1/300 is given one-half hour before injection. Wash the parts with alcohol the night before and paint with 10 per cent. tincture iodine. Paint with 10 per cent. tincture iodine on the morning of operation. A Buck's extension is put on before operation, so the limb will be ready for the weight immediately after the operation. A very small pointed scalpel is used to puncture the skin to make opening for the insertion of the needle, so as not to carry in any infection, especially the staphylococci from the hair follicles and sebaceous glands and no epithelial cells into joint. The needle is best entered through the opening made by the scalpel (about 2 to 3 inches from the joint) and then inserted into the joint. Negative pressure is made and the material in the joint flows into syringe and rises above the formalin and glycerine, then we know positively that we are in the joint. By aspirating, the amount of fluid in the joint is reduced; the tension relieved, and this lessens the likelihood of destruction of the synovial membrane cartilage, and the joint capsule and at once mitigates the pain due to tension. After aspirating the required amount, the formalin and glycerine solution is injected.

#### AFTER INJECTING

The needle is withdrawn just outside of joint cavity, then before the needle is entirely removed negative pressure is made, which causes collapse



of the wall made by the puncture and thus closes the tract. This prevents the formalin and glycerine from extending through this to the skin, which may cause a chemical dermatitis. The skin opening is sealed with cotton and collodion and the joint manipulated as desired. The solution injected is 2 per cent. formalin in glycerine which has been prepared at least 24 hours in advance. Any solution under this time will cause a necrosis of tissue as the formalin will not be properly dissolved. The amount injected varies with the size of the joint. In the larger joints 10 to 25 cc. are injected. The number of injections depend of course on the case. Usually two injections suffice to do the work, but as many as five or six will occasionally have to be tried before giving up any case.

#### FREQUENCY OF INJECTION

They should be given every 7-10-14 days with intermediate aspirations, until the infection subsides. After the injection on the second day, the local reaction manifests itself by a diffuse hyperemia. The skin assumes a delicate pink hue. On the fourth or fifth day the swelling and pain gradually becomes less and subsides. After this the weight is removed daily, the joint massaged and passive motion started. The patient is kept in bed two or three weeks, depending upon the class of the infection. There is a temperature increase of one or two degrees on the second day after the injection, with a general leucocytosis which subsides in a few days. The injection is stimulating, antiseptic and lubricating.

#### EFFECTS OF INJECTION

1. It renders the fluid in the joint a poor culture medium.

2. It produces great poly-morphonuclear leucocytosis in the joint fluids from 80 to 90 per cent. In over 2200 examinations we found an average of 86 per cent. increase.

3. It produces a local coffer-damning and infiltration of the lymph spaces and vessels. The polynuclear cells give up a trypsin ferment which aids in the converting albuminous property into peptones, thus rendering them absorbable.

4. It does not decrease their phagocytic action but seems to increase it, which is the factor in overcoming infection and checks intoxication.

5. It produces a constitutional leucocytosis of 11,000 to 22,000.

The Buck's extension with 20 to 30 pounds of weight is at once put on, this relieves the intra-articular pressure, overcomes the muscular tension and rigidity which nature causes in its efforts to get the limb in the best possible position. It separates the inflamed surfaces of the joints and can be applied to any of the extremities. This alone relieves the pain and keeps the limb in a straight position and prevents the horrible and unsightly deformities we so often see following these infections, and especially those the onset of

which is accompanied by a chill and which practically always ends in ankylosis. In closing let me impress on you, that,

(1) This injection treatment was never intended for a tubercular arthritis as these are all practically osteal in origin.

(2) No form of treatment will restore joint structures that have already been destroyed by infection. Time, therefore in the treatment is an element of great importance.

(3) Never open a joint to drain, for ninety-five out of one hundred cases handled will end in a complete bony ankylosis.

(4) The term rheumatism is a misnomer and should be forgotten, and the term *acute metastatic arthritis* applied to these infections. All of these except the traumatic are a metastatic infection from some other focus in the body, and there is no such thing as an idopathic rheumatic arthritis. By these means practically all deformities can be overcome. The number of ankyloses greatly diminished, many cures established and the period of invalidism greatly reduced.

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*Pituitary Solution—Abbott*—Liquor Hypophysis U. S. P. A sterilized solution of the water soluble extract of the posterior portion of the pituitary glands of cattle. It is standardized by the method of Roth. (For a discussion of the actions and uses of pituitary preparations, see New and Nonofficial Remedies, 1919, p. 204.) The Abbott Laboratories, Chicago.

*Pituitary Extracts—Lederle*—A sterile solution containing the active principles of the posterior lobe of the pituitary body. It is standardized by the method of Roth and has the strength of Liquor Hypophysis, U. S. P. (For a discussion of the actions and uses of pituitary preparations, see New and Nonofficial Remedies, 1919, p. 204.) Lederle Antitoxin Laboratories, New York.

*Antidysenteric Serum (Polyvalent)—Lederle*—(For a description of Antidysenteric Serum, see New and Nonofficial Remedies, 1919, p. 269, and for Antidysenteric Serum—Lederle, see The Journal A. M. A., April 14, 1919, p. 1136.) It is also marketed in syringes containing 50 Cc. each, with sterile needle. Lederle Antitoxin Laboratories, New York.

*Streptococcus Vaccine (Polyvalent)—Lederle*—(For a description of Streptococcus Vaccine, see New and Nonofficial Remedies, 1919, p. 291 and other Lederle preparations see The Journal A. M. A., April 19, 1919, p. 1136.) It is also marketed in 10 Cc. and 20 Cc. vials; in packages of four 1-Cc. vials containing, respectively, 50, 100, 200 and 400 million killed streptococci; and in packages of four syringes containing, respectively, 50, 100, 200 and 400 million killed streptococci. Lederle Antitoxin Laboratories, New York (Jour. A. M. A., July 5, 1919 (p. 35))

## Indications for the Removal of Tonsils in Childhood\*

Hubert C. King, M. D., Cleveland

**Editor's Note.**—Tonsillectomy is not a panacea. Even in skilled hands it is an operation fraught with danger. Yet no surgical procedure is performed with less appreciation of its real indications. That is why Dr. King strikes a telling blow in reemphasizing the necessity of having absolute indications for tonsillectomy, especially in childhood, during which period of life it is now customary to enucleate tonsils on bare suspicion. There is a tendency to deplore the enthusiasm of school inspectors who relegate all enlarged tonsils to immediate operation. Leading throat specialists, especially those who are looking-up their records, are inclined to give pause and think. When tonsils actually obstruct breathing mechanically, or menace the health of a child on account of frequent attacks of tonsillitis, of course, nobody hesitates about advising their enucleation; but a mere history of sore throat should be backed-up with evidence of some involvement of the nose, ear, lungs, glands or general health, before operation is indulged in. Dr. King calls attention to just the indications for the removal of tonsils in childhood that serve as a sane guide.

**T**ODAY the faucial tonsils occupy a more important place in clinical medicine than at any time in the history of our profession. The studies which have pointed to them as foci of systemic infection, have resulted in exalting their importance. This increase in our knowledge should help to clarify the situation and aid us in determining, with more discrimination, those cases in which tonsillectomy is indicated. I am sure, however, the the operation of tonsillectomy is still resorted to in childhood without a clear knowledge of its indications, its limitation, and its possibilities, not to mention its contraindications.

It is surely not the simple, harmless, minor operation which some would have us believe. That it is devoid of danger and that unpleasant complications never follow is not quite a fair statement of facts. In trained hands the danger is no doubt slight. But as deaths from hemorrhage, sepsis, and anaesthesia still occur, we must regard the operation as a major or serious procedure, and keep its limitations clearly in mind.

### THE ROLE OF THE TONSILS

The simplest indication for removal of the tonsils is given by Perry who advises tonsillectomy, as a prophylactic measure, in all children of four years. Beck says most tonsils are "better out than in." Few men, larynologists or general practitioners, will sanction such a radical stand.

The work of Henke, Schoeneman, Lenart and Hopman goes to show that the tonsil is an ordinary lymph gland, situated in the pharynx, and that its function is that of any other lymph gland. It has a certain area to protect against infection. In accordance with this view—and there is much in clinical experience to support it—acute tonsillitis is not a distinct disease entity, and the local symptoms are due to the lodgement, in this particular gland, of infection from the area which it drains. These infections originate in the nose, the accessory sinuses, or mucous membrane of the mouth. Layton believes that the tonsils form an early important barrier to microorganisms

which attempt to invade the body through the mouth and nose. He states that "when we find these organs enlarged we must not at once infer that they are the cause of any surrounding inflammation. It may be they are enlarged in consequence of it." In a worthy attempt to stop the ascending infection the tonsils themselves may be worse for the fray. The chronically infected tonsil has been likened to a *choked filler*.

Concerning tonsils in childhood, two preliminary statements are necessary. *First*, one cannot speak of *adenoids* and *enlarged tonsils* as if they were two different affections. They are but manifestations of one process, an overgrowth, with or without infection, of the normal lymphoid tissue of the nasopharynx.

*Secondly*, the indications for tonsillectomy in childhood differ somewhat from those of adult life. The tonsils are normally larger in children than in adults. All the lymphoid tissue of the body, the solitary follicles and the Peyer's patches of the intestine, and the palpable lymph glands share in this physiological hypertrophy. We shall refer to this point again.

### WHEN SHOULD THE TONSILS BE REMOVED?

There is probably no child too young for tonsillectomy, provided the proper indications for the operation exist. Guggenheim, writing in the *INTERSTATE MEDICAL JOURNAL*, protests against their removal before the child is eight years old. Crowe, Watkins, and Rothholz, in the *JOHN HOPKINS BULLETIN* in 1917, in a careful study of the cases operated in that hospital during a five year period, state that, as "a general rule, the tonsils should not be removed in children up to fifteen years of age, solely because they are enlarged or detritus is seen in the crypts." I am sure I have seen children younger than six years in which the operation was clearly indicated.

Tonsil and adenoid tissue may be of harm to the child and removal be indicated for two general reasons. By their size they may produce mechanical obstruction and because of infection they may be of danger to the health of the child. It is doubtful if the first indication very frequently exists without the second. I should have

\*Read before the Section on Obstetrics and Pediatrics, during the 73rd Annual Session of the Ohio State Medical Association, at Columbus, May 6, 1919.



some difficulty recalling a case where the lymphoid tissue was producing symptoms of obstruction, that did not also show chronic infection.

One point must be clearly understood and it is that in childhood large tonsils should not be removed simply because they are large. After the second year they normally hypertrophy and retrograde changes do not take place before adult life. "In children enlarged tonsils are not synonymous with infected tonsils," writes George E. Schambaugh. Still, also insists upon this point. Here, perhaps, we have made most of our mistakes. School physicians, in particular, are prone to look at a child's throat and pronounce every tonsil that is visible a subject for removal. In adults the enlarged tonsil is much more likely to be the infected tonsil.

Many cases in which there is mechanical obstruction to respiration will be benefited by removal of the adenoids alone. Unless the indications for tonsillectomy are clear, we should advise adenoidectomy alone as the first procedure. In a certain number of cases this controls the difficulty and the tonsils, if naturally enlarged, may afterward become smaller.

The tonsils drain those areas of the upper respiratory tract which are portals of entry for the ordinary respiratory infections. When the acute infection has subsided the tonsil, which has been likened to the *clogged filter*, may still harbor these organisms and, as a focus of itself, may later feed the organisms or their toxins into the blood stream.

The presence, in the throat, of these chronically diseased structures may predispose the child to more frequent attacks of respiratory infection. These organs, formerly a barricade against the entrance of infection to the respiratory tract, now seem to favor the attack. This is both because of the low local resistance of the structures and because of the low general resistance of the patient to infection in general, because of the impairment of health incident to the harboring of a focus of infection.

In fact, general ill health or lack of bodily vigor, is often the chief harm resulting from these chronic lymphoid infections. The child is pale, has a pasty complexion, the vitality is low and the resistance to every manner of infection is slight. Repeated *colds* help to complete the vicious circle. Also by their hypertrophy these organs may cause poor respiratory movements and deficient aeration of the blood. These children also rest poorly at night, and lack the benefit of refreshing sleep. They are nervous, peevish and of bad disposition as a consequence.

#### COMPLICATIONS DEMANDING TONSILLECTOMY

One can certainly say there are cases showing repeated attacks of upper respiratory infection, with clinical signs and symptoms which we call follicular tonsillitis, in which the frequency of

these attacks are lessened by tonsillectomy and by that procedure only.

Certain chronic infections in organs akin to the upper respiratory tract are indications for removal of the tonsils. A chronic catarrhal or suppurative otitis media or an Eustachian tube affection may be treated more efficiently after badly infected tonsils are removed. Given a child with infected tonsils and adenoids, a single attack of acute otitis will strengthen our decision for removal. Similarly, there are cases in which the infection regularly spreads to the bronchi in which removal of the nasopharyngeal tissue alone may prevent the recurring attacks. In repeated mild upper respiratory infections, particularly in young children, one is justified in advising removal of the adenoids alone,—a much less serious procedure, although one requiring as much technical skill—and in hoping that this will remedy the difficulty. If the outcome does not uphold our judgment we can recommend tonsillectomy at a later date. A chronic infection in adenoid tissue, flaring into activity from time to time, is a cause of many febrile disturbances in childhood. Another point in controlling upper respiratory infections in childhood is one which is frequently overlooked. One sees an efficient tonsillectomy performed to prevent recurring infections and on examination finds several carious teeth exuding pus to spread infection to the nasopharynx.

An enlargement of the cervical and submaxillary lymph glands is common during the acute nasopharyngeal infections of childhood. Almost all of these glands return to normal during the course of a few weeks. However, persistent enlargement of the cervical lymphatics, as a rule, is the result of chronic tonsil infection, and will not subside until after removal of the tonsils.

The tubercle bacillus enters the nose and throat and, from this portal of entry, infects the cervical glands. At this point we may simply say that diseased tonsils may favor the infection. In tubercular glands of the neck, we quite commonly find diseased tonsils. In such cases, it is advised to increase the general resistance of the child by fresh air, proper feeding, and syrup of ferrous iodide. If the glands subside we may then care for the throat. We hesitate to advise removal of the tonsils while the glands of the neck are subsiding, for fear of stirring them into further activity. If the glands suppurate both glands and tonsils should be removed.

We have been taught that we should advise removal of the tonsils after tonsillitis to prevent invasion of the blood stream with resulting acute rheumatic fever, endocarditis, or chorea. After a single attack of rheumatism or endocarditis we have advised tonsillectomy to prevent reinfection of the joints or endocardium. Certainly if the tonsils are diseased—and I must admit they almost always are in these cases—they favor these serious sequelae by lowering both local and gen-

eral resistance to infection. If they are chronically infected they may retain in their crypts organisms capable of causing serious systemic infection. If, however, we regard them as ordinary lymph glands, simple bacterial filters, it is difficult to understand how their removal can prevent the occurrence or recurrence to the diseases in question, except as we have mentioned. Still says that "certainly it is very common to find enlarged tonsils associated with rheumatic affections. Whether rheumatic infections can be prevented by removal of the enlarged tonsils has yet to be determined. I have kept clinical notes for some years of cases bearing upon this point, but they only prove that the ordinary removal of tonsils does not prevent the recurrence of rheumatism in a child who has previously had rheumatism." Zahorsky states definitely that he knows rheumatism, endocarditis, and chorea may occur after the tonsils have been removed. I have seen a case of typical acute rheumatic fever after tonsillectomy and a case of acute hemorrhagic nephritis after a severe pharyngitis in a child whose tonsils had been removed a year before. Dr. John Phillips tells me he has seen recurrence of endocardial infection after removal of the tonsils. In cases of rheumatism and endocarditis it is certainly usual to find the tonsils showing evidence of chronic infection. The organisms causing these diseases enter through the upper respiratory tract and are halted in their progress at the pharyngeal lymph gland—the tonsil. Therefore the large majority of these cases will be in children in whom the tonsils are diseased. Because of the lowered local resistance of these tonsils they may be more subject to a recurrent invasion. Schambaugh says that "A child which has suffered from a serious systemic infection, such, for example, as an endocarditis, or acute Bright's as the result of an acute attack of tonsillitis, should, we believe, have the tonsils removed, even though they are not enlarged and though there has been only this one attack of tonsillitis." It is rare, I believe, to find a case which will fulfill these requirements, as most of these tonsils are obviously diseased. In such a case, however, how much protection do we gain by tonsillectomy if we accept the theory advanced as to the function of the tonsil? Carefully tabulated observations covering a large number of cases for many years are necessary to settle the question. It brings to mind some statements by Sir James Mackenzie. He insists that to acquire a knowledge of the life history of chronic diseases it is necessary to be able to follow individual cases from the start to the finish. Moreover he states that investigation regarding prognosis can only "be carried out by those who have the opportunity of watching individuals during the whole course of the disease." The whole point is that the general practitioner has the only real opportunity for fulfilling these requirements and

it is to be hoped that he will realize the value of his opportunities, and of his importance and tabulate the results of his observations. Then we shall learn.

#### DIAGNOSING THE CHRONICALLY INFECTED TONSIL

Granted that a chronically infected or diseased tonsil should be removed, how can we recognize it as such? It has already been stated that, because of the normal hypertrophy of childhood, enlarged tonsils are more frequently infected tonsils in adults than in children. However, in children it is more of a rule that chronically infected tonsils are enlarged tonsils.

Schambaugh calls attention to several diagnostic points of value. *First* retention of cheesy secretions in the crypts of the tonsils is by no means as common in children as in adults and, as a rule, such secretions are found only in tonsils that are enlarged, and especially in the cases where the tonsils are embedded in the soft palate. The presence of these cheesy masses may be surmised by the detection of a bad odor on the breath. I have recently seen a case, the subject of repeated attacks of tonsillitis with obviously diseased tonsils in which carefully directed pressure failed to express anything whatever from the crypts. At operation the sectioned tonsil was badly diseased. Moreover the expression of this caseous material is possible from tonsils not the subjects of chronic infection. The expression of true pus is conclusive, but very rare. Schambaugh describes a *second* finding which I have found of considerable help and quite trustworthy. He says that the presence of chronic infection of the tonsil may be suspected if one sees a well marked congestion of the anterior pillar while the rest of the pharyngeal mucous membrane appears normal. Schambaugh also describes a *third* sign found in chronically infected tonsils. "Shining through the surface, in patches varying in size from a pin head to a centimeter across, will be seen a yellowish fluid which cannot be expressed by pressure over the tonsil. They represent follicles the mouths of which have been closed. When slit open the contents are found to be a thick grumous pus." In children the best guide of all is found in the answer to the question as to whether or not the child is the subject of repeated attacks of tonsillitis. It is often hard to obtain a clear history of tonsillitis. The mother admits sore throat, but denies tonsillitis. Satisfactory diagnosis may require that we see the child during one of these attacks of sore throat.

There is a final point worthy of mention and that is, that no one should attempt to decide the condition of the tonsil directly following an acute attack. Nature can do a great deal of repair and at least a month should elapse, following an acute attack, before the tonsil is judged on appearances. On this point, Layton in 1914, writing in the *Lancet*, states that the "Throat Department



at Guy's Hospital was formerly flooded with tonsil cases which had to wait from three to five months for operation. During this time their teeth were attended to and nasal breathing exercises were taught." When later admitted for operation Layton found that no operation was necessary.

#### CONCLUSIONS

What then are the indications for tonsillectomy in childhood? (1) Mechanical obstruction resulting in difficulty in swallowing, speaking or breathing. (2) Infection which results in rendering the tonsils, formerly a barrier to infection, a menace to the health of the individual. What are some of the evidences of this infection?

(A) Frequent tonsillitis. In these cases a careful examination must also be made of the

teeth, accessory sinuses of the nose, the nose, and ears.

(B) Recurrent attacks of bronchitis or laryngitis with diseased tonsils.

(C) Chronic otitis media or Eustachian tube affection.

(D) Chronic cervical adenitis.

(F) Tuberculous cervical adenitis, with proper consideration of the time of the operation.

(F) Any serious systemic affection in which we have an evidence of diseased tonsils—probably most of these children will be cases for tonsillectomy.

(G) Children without many definite symptoms in whom we find definite evidence of tonsillar infection.

1110 EUCLID AVE.

## OHIO PUBLIC HEALTH NOTES

Columbus board of health has notified the city council that it favors the employment of a full-time health officer at a salary of \$5,000 a year. As part of an economy program, however, the council has indicated that the present plan, whereby Dr. W. L. Dick acts as health officer in addition to executing his duties as medical inspector, will be continued temporarily. Dr. Dick's salary has been increased from \$2,300 to \$2,600.

—A new building code authorizing the city health department to cope with difficulties that militate against Hamilton's good health is being urged as a result of a survey conducted in that city. Laxity of the present law is held responsible for the rental of many disease-breeding properties.

—The trachoma clinic conducted in Chillicothe by Dr. J. C. Johnson of the United States Public Health Service, and in cooperation with the State Department of Health, treated 40 of the 69 cases reported in Ross county, a number of these cases having been treated before the clinic was opened. Fully 50 per cent. of the cases were found in the schools.

—Great strides in improving sanitary conditions in Cincinnati bakeries have been made since 1911, when bakeshop inspection was inaugurated. Then, of 226 shops operating, only 43 were rated possible; none excellent. Now only two are in the fair class; many are in the good, very good, excellent, and five in the very excellent class. Among the five of the latter class is the bakery of Cincinnati General Hospital.

—On advice that a number of dogs suffering from rabies were at large in the city, the Mt. Vernon board of health recently adopted a resolution ordering that all dogs be muzzled or penned up by the owner.

—The State Department of Health has approved plans and specifications for a new water filtration plant to be erected in Defiance.

—After more than 35 years of service as a member of the faculty at Oberlin College, Miss Delphine Hanna, professor of physical education, has retired. Miss Hanna began her service in 1885 as director of the women's gymnasium.

—The annual report of the Cleveland bacteriological laboratory discloses the fact that the city's milk supply in 1919 was below standard, and that the unfiltered water supply for the downtown and eastern sections of the city is unsafe. Substantiating the findings on the milk situation, the report states that 50 per cent. of 2,229 dealers' samples, taken chiefly from delivery wagons, showed more than 50,000 bacteria in every 15 or 20 drops, in excess of the legal standard. The percentage of milk meeting the required filter tests was only 12.9, the lowest since 1915. The tests showed 71.5 per cent. to be fairly clean; 14.5 dirty; and 1.1 filthy, the highest in six years. Construction of a proposed filter plant for the east side will aid in remedying the unsafe water situation; meanwhile residents of the section are urged to boil drinking water.

—The Hamilton board of education has appointed Dr. John A. Burnett as physician for the public schools of that city at a salary of \$1,800 a year. Heretofore, the Hamilton schools, with an attendance ranging from five to six thousand, have had no medical attention, and the board's action in meeting this provision of the Hughes health act is to be commended.

—A total of 14,954 industrial accidents were reported under the Workmen's Compensation Act during January, of which number 69 were death claims. Increased industrial activity is noted in the increase of 1,781 injury and death claims filed in January over the number in December.

—A model district for teaching of nurses, opened in Columbus by the Society for the Prevention and Cure of Tuberculosis, includes a clinic for undernourished children.

### Three Societies Adopt New Schedules

Belmont, Erie and Muskingum County Medical Societies are among those which have lately put into effect new medical and surgical fee schedules to keep pace with the advancing cost of practice.

The revised schedule in Belmont County provides a minimum fee of \$1.00 for office consultation; \$2.00 for day visit, and \$5.00 for night visit. Fees for fractures, dislocations, amputations and dressings correspond with those approved by the Industrial Commission, with a fee of \$10.00 for the administration of anesthetics in major operations. The minimum for obstetric service is \$25.00; treatment of venereal diseases \$10.00 and up, and office gynecology \$2.00 and up.

Under the schedule which became operative in Erie County on February 1, day visits are rated at \$2.00, an increase of fifty cents over the former charge, and night visits at \$4.00, instead of \$3.00.

The detailed schedule adopted in Muskingum County provides the following minimum fees:

*Office Fees*—Ordinary consultations, \$1.00 to \$5.00; examinations (with certificate or affidavit), \$2.00 to \$5.00; urinalysis, \$1.00 to \$3.00; vaccinations, cost of vaccine plus, \$1.00; dressing minor wounds, \$2.00 to \$5.00; gynecological examinations, (treatment extra), \$2.00 to \$10.00; venereal diseases, \$2.00 up; removal of small growths, \$2.00 up; prescription and advice by telephone, \$1.00.

*Visits*—In the city—8 a. m. to 6 p. m., \$2.00; 6 p. m. to 9 p. m., \$2.50; 9 p. m. to 8 a. m., \$3.00; In the country, first two miles, \$2.00; each following mile, depending on roads and weather conditions, per mile, 50c to \$1.00; night visits in the country same as in the city plus after first mile, per mile, (livery hire to be paid by patient) \$1.00 to \$2.00; dangerous contagious diseases, double the ordinary; consultations, mileage plus, \$10.00.

*Obstetrics*—In the city, \$25.00 up; in the country, add mileage.

*Miscellaneous*—Administering anesthetic, one hour or less, \$5.00; over one hour, \$10.00; medicine hypodermically, cost of medicine additional, \$2.00 up; medicine intravenously, cost of medicine additional, \$10.00 up; venereal prophylaxis, \$2.00; serums and vaccines in office, cost of materials additional, \$2.00; administering of antitoxin, cost of antitoxin additional, \$5.00; typhoid prophylaxis (3 doses), \$15.00; typhoid prophylaxis (Lipovaccine), \$10.00; arsenobenzol (salvarsan), \$15.00 to \$25.00.

*Gynecological Operations* — Dilatation and curettage, \$25.00 to \$50.00; intrauterine douche, \$2.00 to \$10.00; operations on cervix, \$30.00 to \$100.00; perineorrhaphy, \$50.00 to \$100.00; repair of vesico-vaginal or vesico-rectal fistula, \$75.00 to \$150.00; oophorectomy or salpyngectomy, \$150.00 to \$300.00; hysterectomy (abdominal), \$200.00 to \$300.00; hysterectomy (vaginal),

\$100.00 to \$200.00; suspension of the uterus, \$100.00 to \$150.00; other laparotomies, \$100.00 up.

*Dislocations*—Hip, \$75.00 up; knee, \$50.00; ankle, \$25.00; shoulder, \$25.00; elbow, \$25.00; wrist, \$10.00; clavicle, \$10.00; finger or toe, \$5.00; maxilla, \$10.00.

*Fractures*—Femur, \$50.00; tibia or fibula, or both, \$25.00; pelvis, \$50.00; humerus, \$25.00; radius or ulna, \$15.00; finger or toe, \$5.00; clavicle, \$25.00; rib or ribs, \$5.00; elbow joint, \$50.00; regular fees for subsequent visits.

*Amputations*—Hip joint, \$100.00 to \$200.00; thigh, \$75.00 to \$150.00; leg, \$50.00 to \$100.00; knee joint, \$75.00 to \$150.00; shoulder, \$100.00 to \$150.00; arm, \$50.00 to \$100.00; forearm or hand, \$50.00 to \$75.00; foot, \$50.00 to \$75.00; carpus or tarsus, \$50.00 to \$75.00; finger or toe, \$10.00 to \$15.00; regular charges for subsequent visits.

*Miscellaneous Surgery*—Capital operations, excisions, lithotomy, trephining, thoracotomy, enterostomy, gastro-enterostomy, cholecystotomy, prostatectomy, resection of ribs, etc., \$150.00 to \$500.00; hermotomy (one side), \$100.00 to \$150.00; herniotomy (one side), \$100.00 to \$150.00; herniotomy (both sides), \$150.00 to \$200.00; appendectomy, \$100.00 to \$300.00; reduction of hernia (by taxis), \$5.00 to \$10.00; excision superficial tumors, \$15.00 to \$200.00; hemorrhoids, \$50.00 to \$200.00; minor eye operations, \$5.00 to \$25.00; major eye operations, \$50.00 to \$200.00; operation on nose, \$25.00 to \$100.00; fistula, rectal, \$50.00 to \$150.00; varicocele, \$25.00 to \$50.00; hydrocele operation, \$50.00 to \$100.00; Aneurism operation, \$50.00 to \$100.00; varicose veins operation, \$50.00 to \$100.00; hare lip operation, \$100.00 to \$200.00; tracheotomy, \$50.00 to \$100.00; intubation, \$25.00 to \$100.00; tonsils and adenoids, \$30.00 to \$100.00; aspirating knee joint, \$10.00 to \$25.00; aspirating pleura, \$10.00 to \$50.00; circumcision, \$25.00 to \$30.00; sounding bladder, \$10.00 to \$25.00; supra pubic cystotomy, \$100.00 to \$200.00; perineal cystotomy, \$150.00 to \$300.00; urethrotomy, \$50.00 to \$150.00; anal fissure, \$5.00 to \$50.00; plebotomy, \$5.00; laminectomy, \$100.00 to \$200.00; nephrectomy, \$100.00 to \$200.00.

### National Health Chief

Dr. Hugh S. Cumming of Hampton, Virginia, has been selected to succeed Dr. Rupert Blue as surgeon general of the United States Public Health Service. Dr. Cumming received his M. D. degree from the University of Virginia in 1894 and entered the public health service as an assistant surgeon in the same year. His appointment as surgeon general came while he was stationed in Paris. Before the war he was quarantine officer at Cape Charles and San Francisco. Dr. Blue will remain in the service as assistant surgeon general, doing research work in influenza.



## Important New Regulations Are Issued Governing Prescribing by Physicians of Intoxicating Liquors and the Obtaining of Alcohol for Drug Compounding

It is important that the physicians of Ohio familiarize themselves with the provisions set forth in this article containing regulations just announced by the Department of Internal Revenue governing the enforcement of the National Prohibition Act, especially those provisions relating to the purchase, prescription, manufacture and use of intoxicating liquor.

The federal regulations and definitions set forth in the National Prohibition Act, passed in October, 1919, have been in effect written into the Ohio laws by the enactment late in January by the Ohio legislature of House Bill 620, which explicitly refers to the provisions of the national act governing the use of liquor for non-beverage purposes, including the prescribing of drugs containing such intoxicants.

The federal regulations are of particular importance, therefore, in this state even though a referendum vote should be taken on the last prohibition law enacted in Ohio.

The Ohio law, House Bill No. 620, just referred to, undertakes to repeal previous Ohio laws on the subject enacted during the session of the same General Assembly, including Amended Senate Bill No. 162 and House Bills No. 526 and 527, on all of which there are pending referenda and by the repeal of which an interesting constitutional question is raised, it being contended by some that the legislature is powerless to repeal laws passed during the same session and on which referenda are pending.

The real reason for the passage of the latest Ohio law was to divert into the coffers of the state fines imposed upon violators of the prohibition law, and which revenue would have accrued directly to the federal government were there no state law in effect.

The following excerpts are taken from those provisions in which the practice of medicine is chiefly concerned. The word "Director" or the phrase "Federal Prohibition Director" refers to Mr. J. A. Shearer, whose newly established offices are located at 34-36 West Gay St., Columbus. The word "Commissioner" refers to the Federal Prohibition Commissioner.

### PERMITS TO PRESCRIBE AND USE

Any physician duly licensed to practice medicine and actively engaged in such profession, desiring to purchase, prescribe or use intoxicating liquor for non-beverage purposes must procure a permit therefore. Application for permit should be submitted on Form 1404, in triplicate, to the Prohibition Director. All three copies must be

signed by the applicant, the original sworn to before a person authorized to administer oaths. If the Director finds the qualifications of the applicant satisfactory he will issue a permit on form 1405, on which the serial number prefaced by the letter J will be noted.

Should the applicant desire to use intoxicating liquors in the manufacture of alcoholic medicinal preparations and other alcoholic compounds, (in accordance with regulations described later), Form 1404, supplemental, must be attached to the above application.

Should the physician remove his office to an address other than the one noted on the permit, he should immediately forward the permit to the Director in order that it may be amended to show the change of address.

Permits issued prior to August 31 of any year will expire on December 31 of that year, and permits issued from September 1 to December 31 of any year will expire on December 31 of the following year unless otherwise provided for. On or before October 1 of each year holders of permits should make formal application on Form 1404 for renewal, such application being filled out in triplicate and all three signed by the applicant, the original under oath.

### PERMITS TO PURCHASE

Permits to use liquor also confer the right to procure liquor upon furnishing permits to purchase and to possess such liquor for the purposes authorized in the permits. Therefore, any physician entitled to procure intoxicating liquor in accordance with these regulations must, in order to obtain such liquor, secure permit to purchase on Form 1410 from the Director.

Special provision is made for the purchase of intoxicating liquors by physicians of homeopathic and eclectic schools, who may, after obtaining permits to use alcohol or homeopathic potencies, attenuations, and dilutions in the course of their practice, procure same from homeopathic pharmacists or others having permit to sell, as stated specifically in the regulations.

### PRESCRIBING INTOXICATING LIQUOR FOR MEDICINAL PURPOSES

Physicians who have filed applications on Form 1404 and obtained permits to prescribe intoxicating liquor, may prescribe distilled spirits, wines or such alcoholic medicinal preparations which are fit for use for beverages as are authorized to be manufactured, for persons upon whom they are in attendance, if after careful physical examination of such persons, or in cases where such examination is impracticable upon the best information

obtainable, the physician believes that the internal or external use of such liquor as a medicine by such persons is necessary will afford relief to them from some known ailment. Physicians who do not hold permits as above may not issue prescriptions for intoxicating liquor.

No prescription may be issued for a greater quantity of intoxicating liquor than is necessary for use as a medicine by the person for whom prescribed, and in no case may spirituous liquor in excess of 1 pint within any period of 10 days be prescribed for the same person by one or more physicians. Further, where spirituous liquor is being administered to any person by any physician or physicians as provided above, the aggregate quantity so administered and the quantity prescribed for any such person may not exceed 1 pint within any period of 10 days. Physicians are not permitted to write prescriptions for liquor for their own use or to use any liquor procured upon prescriptions written by them. Intoxicating liquor procured upon prescriptions may only be used for medicinal purposes by the person for whom prescribed and may not be sold or otherwise disposed of.

Prescriptions for intoxicating liquor may only be filled by a pharmacist. No prescription may be filled more than once, and pharmacists should refuse to fill any prescription for liquor if they have reason to believe that physicians are prescribing for other than medicinal uses or that a patient is securing, through one or more physicians, quantities of intoxicating liquor in excess of the amount necessary for medicinal purposes, which in the case of spirituous liquors shall not be more than one pint for the same person within any period 10 days. Physicians may not prescribe liquor for their own personal use, and pharmacists should refuse to fill any such prescription presented to them.

All prescriptions for intoxicating liquor must be made upon Form 1403 and must contain all the data called for by such form, except that in any case where a physician holding a permit to prescribe liquor is not in possession of such form, due to any reason justifying such condition, and delay in procuring the same might result in loss of life, aggravation of an ailment, or intense suffering, he may prescribe intoxicating liquor upon a form other than Form 1403: *Provided, however, That* such form of prescription must contain all the information called for on Form 1403. Prescriptions for intoxicating liquor may not cover any other medicine or drug.

Blank prescriptions, Form 1403, are issued in book form, serially numbered, and may be procured free of cost by any physician holding a permit to prescribe intoxicating liquor from the Director. The Director should not issue more than one book of such prescription blanks to the same physician at one time. However, a physician may procure a book of blanks when the blanks remaining in the book in his possession are

not sufficient to cover his needs for a reasonable period in advance.

The prescription blanks issued are printed with stubs attached, the stub of the blank being a duplicate thereof. All prescriptions for liquor on Form 1403, as well as those on other forms in emergency cases as above provided, must be written in duplicate, both copies to be signed by the physician and contain all the information required herein. In the case of prescriptions issued on Form 1403, the books containing the stubs or duplicate copies must be returned to the Director from whom secured immediately upon the last prescription blank contained therein being used, or earlier if so directed by the Commissioner or Director. Any unused, mutilated or defaced blanks remaining in the book must be returned therewith. In the case of prescriptions written on other forms in emergency cases, the duplicate copies thereof must be forwarded to the Director at the end of the month in which issued. In all cases blanks, Form 1403, must be used in the order of the serial number printed thereon.

Every physician who prescribes intoxicating liquor is required to keep a record on book Form 1402 to be procured by him from the Director. The physician must keep a record alphabetically arranged of every prescription, for intoxicating liquor issued by him, showing the date of the prescription, the amount and kind of liquor prescribed, the name of the patient to whom issued, the purpose or ailment for which prescribed, and the directions for use thereof, including the amount and frequency of dose.

The Director will check all copies of prescriptions returned to him for the purpose of determining whether or not any physician is violating the terms of the permit issued to him, or whether any person is procuring through one or more physicians excessive quantities of liquor.

#### MANUFACTURE

After special permit to manufacture has been procured in the manner previously described, intoxicating liquor may be used in the manufacture of alcoholic medicinal preparations and other alcoholic compounds under the following regulations:

Distilled spirits and wines may be used in the manufacture of medicinal preparations compounded in accordance with formulae prescribed by United States Pharmacopoeia National Formulary, or the American Institute of Homeopathy, which preparations are unfit for beverage purposes, and in the manufacture of patented, proprietary or other medicines which are unfit for beverage purposes.

Such preparations must contain no more alcohol than is necessary for the purpose of extraction, solution or preservation, and must contain in each fluid ounce a dose as a whole or in compatible combination of one or more agents of recognized therapeutic value and contain no



agents either chemically or physiologically incompatible with the active medicinal agents upon which the medicinal claims are based.

The preparations named below which are included in the U. S. P. and N. F. are held to be fit for beverage purposes. Distilled spirits and wines may, however, be used in the manufacture of such preparations and may also be used in the manufacture of any preparations fit for use for beverage purposes for which formulae are prescribed by the American Institute of Homeopathy, but after manufacture such preparations will be regarded as intoxicating liquor and may not be sold, purchased, bartered, transported, imported, exported, delivered, furnished or used except as specifically authorized in these regulations.

Elixir Aromaticum (Elixir Aromatic).

Elixir Glysyrrhizae (Elixir of Licorice).

Spiritus Juniperi Compositus (Compound Spirits of Juniper).

Tinctura Cardamoni Composita (Tincture Cardamon Compound).

Tinctura Levendulae Composita (Compound Tincture of Lavender).

Cordiale Rubi Fructus (Blackberry Cordial).

Elixir Anisi (Elixir of Anise).

Elixir Aromaticum Rubrum (Red Aromatic Elixir).

Elixir Aurantii Amari (Elixir of Bitter Orange).

Elixir Cardamoni Compositum (Compound Elixir of Cardamon).

Elixir Taraxaci Compositum (Compound Elixir Taraxacum).

Spiritus Myrciae Compositus (Compound Spirits of Myrcia).

Tinctura Aromatic (Aromatic Tincture).

Tinctura Caramelis (Tincture Caramel).

Vinum Aurantii Compositum (Compound Wine of Orange).

Vinum Pruni Virginianae (Wine of Wild Cherry).

Elixir Glycyrrhizae Aromaticum (Aromatic Elixir of Glycyrrhiza).

Tinctura Amara (Bitter Tincture).

The preparations fit for beverage purposes which are authorized to be manufactured as above may be used in the manufacture of other preparations compounded in accordance with formulae prescribed by the U. S. P., N. F., or the American Institute of Homeopathy, which preparations when manufactured are unfit for use for beverage purposes, or in the manufacture of patented, patent, proprietary or other medicines which are unfit for use for beverage purposes.

Wholesale and retail druggists or pharmacists may medicate alcohol in accordance with any one of the seven formulae listed below:

1. Bichloride of mercury, 1 part; alcohol, 2,000 parts.

2. Bichloride of mercury, 0.8 gram; hydrochloric acid, 60 c. c.; alcohol, 64 c. c.; water, 300 c. c.

3. Bichloride of mercury, 1½ grains; hydrochloric acid, 2 drams; alcohol, 4 ounces.

4. Formaldehyde, 2 parts; glycerin, 2 parts; alcohol, 96 parts.

5. Carbolic acid, 1 dram; tannic acid, 1 dram; alcohol, 1 pint; water, 1 pint.

6. Alum, ½ ounce; formaldehyde, 2 drams; camphor, 1 ounce; alcohol and water, each 1 pint.

7. Liquor cresolis comp. (U. S. P.), 10 c. c.; alcohol, 1,000 c. c.

Alcohol may be used in the manufacture of antiseptic solutions and toilet preparations such as lotions, hair tonics, hair dressings, cologne and perfumes that contain no more alcohol than is necessary for extraction, solution or preservation and measure up to the standards prescribed and published by the Commissioner from time to time and are unfit for use for beverage purposes.

#### USES OF INTOXICATING LIQUOR.

*By Physicians.*—Distilled spirits, wines, and the alcoholic medicinal preparations fit for use for beverage purposes which are authorized to be manufactured, may be administered by physicians to their patients for medicinal purposes in cases where the use of such liquor is believed necessary to afford relief from some known ailment and delay in procuring the same through a retail pharmacist upon a prescription might result in loss of life, aggravation of the ailment, or intense suffering. Physicians may obtain not more than 6 quarts of liquor during any calendar year to be administered to their patients only in the quantities necessary to afford relief at the time of administering and may not sell or furnish the same to such persons or to any other persons. The total amount of spirituous liquor administered to any one patient, by one or more physicians, during any period of 10 days may not exceed 1 pint, and where such patient is also procuring spirituous liquor upon prescriptions through a retail pharmacist, the aggregate amount so procured by him and administered to him by a physician or physicians as herein authorized may not exceed such quantity.

Distilled spirits, wines, or the alcoholic preparations fit for use for beverage purposes authorized to be manufactured may be used by physicians in the compounding of alcoholic medicinal preparations under the requirements previously explained: *Provided, however,* That where such preparations are fit for use for beverage purposes according to the standards contained herein the same may only be administered to patients in the same manner and subject to the same restrictions as other intoxicating liquor. Alcohol may also be used by physicians

in the course of their practice for other than internal use.

On filing application for permit to use intoxicating liquor physicians should indicate the kind of liquor which they desire to use, the quantity, the exact manner in which and the purpose for which they desire to use the same.

*In Hospitals or Sanatoriums.*—Persons conducting bona fide hospitals or sanatoriums engaged in the treatment of persons suffering from recognized diseases or ailments may administer distilled spirits, wines, or such alcoholic medicinal preparations fit for use for beverage purposes as are authorized to be manufactured to patients at such hospitals or sanatoriums in necessary quantities upon prescriptions of the hospital or sanatorium physician having supervision over the treatment of patients in cases where he believes that the use of liquor as a medicine is necessary and will afford relief from some known ailment. Such physician is required to issue a separate prescription for each patient in whose treatment the use of such intoxicating liquor is necessary, but it is not required that a separate prescription be issued covering each dose unless prescribed at irregular intervals. All such prescriptions must be made out in duplicate, both copies to be signed in the physician's handwriting and must show the name of the hospital or sanatorium, the date of issuance, the name of the patient for whom issued, the kind of intoxicating liquor prescribed, the directions for use, and the amount of liquor to be administered during any given period. Prescriptions for intoxicating liquor should not cover any other medicine or drug.

*First-Aid Treatment at Manufacturing and Industrial Establishments.*—Persons conducting manufacturing, industrial, or other establishments where the business is of such proportions and of such character as to justify the maintenance of a first-aid service for their employes, may administer distilled spirits and wines to their employes on their premises for medicinal purposes in cases of accident, shock, or other emergency, where the use of such intoxicating liquor is believed necessary, and delay in procuring the same through a retail pharmacist on a physician's prescription may result in loss of life, aggravation of ailment, or intense suffering. Such intoxicating liquor may be administered only by a physician, nurse, or other person in charge of such first-aid service station at the establishment in quantities believed necessary to afford relief at the time of administering and may not be sold or furnished to employees or any other persons.

Establishments procuring intoxicating liquor for the use above stated must keep a record in duplicate and before the 10th of each month transmit one copy under oath, signed by the manager, to the Director showing transactions during the preceding month. This record must show the

amount and kind of intoxicating liquor on hand on the first of the month, quantities and dates received, quantities and dates dispensed, the name of each person to whom dispensed, and the amount on hand at the end of the month. In case no intoxicating liquor is received or dispensed during any month, the record should so state, but must show the amount on hand, and be forwarded to the Director.

In filing application for permit to use intoxicating liquor as above, the persons conducting such establishments should indicate the number of employees, the kind of intoxicating liquor to be used, and that the same will be administered to employees only in cases of emergency.

*Laboratory, Manufacturing and Technical Use.*—Alcohol may be used in quantities necessary for legitimate laboratory purposes, such as industrial, chemical, biological, bacteriological and clinical, and in all manufacturing and technical processes and operations not specifically covered by the regulations, provided in each case that the use is strictly nonbeverage and is of such a nature as to effectually preclude diversion of the alcohol for other than authorized nonbeverage purposes.

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### "Hello Canton"

In the February issue we handed the city of Canton a little bouquet for the many public health activities in which its health department and voluntary organizations are engaged. Immediately Akron sent us the following "come back" which we acknowledge with thanks:

Akron has had an eye, ear, nose and throat clinic for children several years where as high as 90 patients a month are seen and about 25 a month operated on, and many receive glasses; free tubercular clinic with several nurses, and a free venereal clinic with a home for female venereal patients. Also has a city health service with visiting nurses who give free instructions and assistance in the homes, and school physicians and nurses who visit the schools daily.

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### Government Needs Physicians

The United States Civil Service Commission announces a large number of physicians are needed for employment in the Indian service, the Public Health Service, the Coast and Geodetic Survey, and the Panama Canal Service.

Entrance salaries as high as \$200 a month are offered, with prospect of promotion in some branches to \$250 and \$300, and higher rates for special position.

Further information and application blanks may be obtained from the secretary of the United States Civil Service Board at Cincinnati or from the United States Civil Service Commission at Washington, D. C.



## Action in Perfecting Organization Under New Health Code Hastened by Prevalence of Contagion

Prevalence in the state of smallpox, scarlet fever and diphtheria together with an epidemic of influenza has hastened in Ohio the organization of the district health boards, under the Griswold law amending the Hughes Health Code.

Of the 88 counties of the state, 50 have approved budgets submitted by the boards of health. There have been 33 commissioners of health chosen in the various districts, 12 of whom are to serve full time. Some districts have employed the same commissioner as the city in the same county. These now number three. Twenty-five districts of the fifty now organized are making provision for a public health nurse and already 30 nurses have been asked to cooperate with the health boards in the various counties.

There seems to be a hesitancy on the part of some districts to organize, holding up the completion of their health boards because of the financial question, many waiting to see what action neighboring counties were taking. The problem of finances arises over the change made by the amendment of the Hughes bill. The original bill based the amount of the budget on the population while the amended act provides that the budget is to be "apportioned among the townships and municipalities in the district on the basis of tax duplicates." This means that an average levy will be about one-tenth of a mill on the county duplicate. Such a levy would give any county an adequate budget for carrying on the new health organization.

Following their election to office of county commissioner, many of the newly elected heads have called at the office of the State Board of Health and have received information from those officials as to the performance of their new duties.

The following list comprises the 50 counties organized before February 15 and also the 33 physicians who have been chosen as commissioners in their districts:

Allen.....	John J. Sutter, M. D.
Ashtabula.....	G. T. Wasson, M. D.
Auglaize.....	G. L. Lyne, M. D.
Belmont.....	F. R. Dew, M. D.
Brown.....	E. D. Jackson, M. D.
Butler	
Carroll	
Clark	
Clermont	
Clinton.....	Robert Conard, M. D.
Columbiana.....	R. M. Schwartz, M. D.
Crawford.....	J. J. Martin, M. D.
Delaware	
Darke	
Fairfield	

Franklin.....	C. M. Valentine, M. D.
Fulton.....	C. H. Speen, M. D.
Gallia	
Geauga.....	T. F. Myler, M. D.
Guernsey.....	D. L. Cowden, M. D.
Hamilton.....	C. A. Neal, M. D.
Hardin	
Henry.....	C. H. Skeen, M. D.
Huron.....	W. H. Whisler, M. D.
Lake.....	Herbert Kenning, M. D.
Lawrence.....	Orlyn Wiseman, M. D.
Mahoning.....	John D. Boylan, M. D.
Marion.....	N. Sifritt, M. D.
Medina.....	Roy A. Brintnall, M. D.
Mercer.....	F. E. Ayers, M. D.
Miami	
Montgomery	
Morgan.....	James B. Naylor, M. D.
Morrow.....	R. L. Pierce, M. D.
Muskingum.....	Milton O'Neal, M. D.
Noble.....	F. A. Murrey, M. D.
Perry.....	H. F. Minshall, M. D.
Preble.....	G. W. Hamsher, M. D.
Pike.....	Geo. B. Nye, M. D.
Putnam	
Sandusky.....	Orange H. Thomas, M. D.
Scioto	
Shelby	
Stark	
Summit	
Trumbull.....	J. E. King, M. D.
Warren.....	E. Blair, M. D.
Ross.....	G. E. Robbins, M. D.
Washington	
Wood.....	H. J. Powell, M. D.

### Health and Hospital Survey Finds Interesting Community Problems

The far-reaching effects of the health and hospital survey being conducted in Cleveland under the auspices of the Cleveland Hospital Council were indicated, February 3, when the survey committee submitted its preliminary report before the annual meeting of the council.

The report presented was compiled by Dr. Haven Emerson, director of the survey, former New York health commissioner, and Dr. Michael M. Davis, Jr., of the Boston Dispensary, who made the following recommendations:

Increase in hospital beds by 1,500. To partially meet this need the survey committee proposes to ask the issuance of bonds for the addition of wings to the city hospital which will provide 700 extra beds. "A more democratic use of the existing hospital facilities" is recommended in view of the fact that the committee says it has found the control of hospitals to be in the

hands of a limited proportion of the medical profession.

Indorsement of the university hospital and teaching center group planned for Western Reserve University. The group will include a combination of Lakeside and maternity hospitals and Western Reserve university medical school.

Erection of new buildings to provide a hospital unit for public service and the training of physicians and nurses under supervision of Western Reserve university.

Enlargement of Rainbow hospital to provide 100 beds for convalescent children.

Establishment of branch hospitals and dispensaries in or near downtown hospitals.

Establishment of a central training station for crippled and disabled workers on the same principle as those conducted for disabled soldiers, which would provide a shop for making apparatus and a treatment center to which orthopedic surgeons and industrial surgeons may send men and women.

Establishment of self-supporting clinics for groups of small industries unable to maintain their own hospital centers. According to Dr. Emerson, more than 50,000 employes cannot get the benefit which a large industrial unit provides economically in its own plant.

Establishment of a convalescent hospital for 200 adults, possibly as an extension of the Warrenville institution.

Provision of 600 additional beds for hopeless tuberculosis patients.

Establishment of a West Side dispensary.

## OHIO HOSPITAL NOTES

—Members of the State Board of Administration told the finance committee of the Legislature, in a recent conference, that unless a substantially increased appropriation is made for the year beginning July 1, 1920, it would be necessary to close the Ohio State Tuberculosis Sanatorium, Mt. Vernon. This would be possible inasmuch as patients are not committed from the various counties but come to the sanatorium voluntarily.

—Plans have been drawn for a cottage for tubercular patients at the Massillon State Hospital. Heretofore, these patients have been quartered in regular wards and were a constant danger to other patients.

—Daily cost of caring for a patient at the Deaconess Hospital, Cincinnati, was \$3.47 during 1919, when 1,987 patients were cared for.

—When the influenza situation threatened to become serious in Canton in late January the city board of health commandeered a former hotel building for use as an emergency hospital, there-

by adding 150 beds to the city's normal hospital capacity.

—Muskingum County commissioners have definitely expressed themselves as opposed to the erection and maintenance of a joint tuberculosis hospital with Fairfield, Perry, Licking and Coshocton Counties, a plan which has been under consideration for several years.

—Dr. R. H. Bishop, Jr., former Cleveland health commissioner and member of the Red Cross Tuberculosis Unit to Italy, has become acting superintendent of Lakeside Hospital, Cleveland, succeeding Dr. A. R. Warner, who resigned January 1 to become executive secretary of the American Hospital Association.

—Bellefontaine City Council has passed an ordinance giving the Mary Rutan Hospital free gas and electricity.

—In the six years of its existence Salem Hospital has treated more than 6,000 patients, according to a report of the superintendent. During the past year 1,318 persons were admitted for treatment.

—A temporary isolation hospital established on the second floor of the Columbus city clinic accommodates twelve patients.

—Changes in the personnel of Gallipolis hospital staffs include the transfer of Dr. John T. McVey from the Ohio Hospital for Epileptics to the Massillon State Hospital; Dr. Milo Wilson from the same institution to Holzer Hospital; and the addition of Dr. Edwin Rose to the staff of the Ohio Hospital for Epileptics as Dr. Wilson's successor. Holzer Hospital announces that its equipment has been supplemented by a supply of radium for therapeutic purposes.

—Plans are under way in Lima to provide funds for the erection of a new hospital structure to replace the present City Hospital.

—The annual report of Springfield City Hospital shows that the total number of patients treated during 1919 was: Free, 906; pay, 1,525; births, 249; total, 2,680. The per capita cost of treating patients per day was \$3.03, and receipts from pay patients were \$49,875.23. Dispensary patients numbered 855 and out-patients 184.

—Cuyahoga County commissioners recently approved expenses approximating \$95,000 for the care of tubercular patients at Warrensville Sanatorium.

—Dr. Walter E. List, who resigned as assistant superintendent of Cincinnati General Hospital to assume the superintendency of municipal hospitals in Minneapolis, Minnesota, has been succeeded by Angelo Doherty, former chief clerk of the hospital.

—Middletown physicians are unanimous in urging the enlargement of the City Hospital to a 100 bed institution. The present capacity is 40 beds, including private rooms and wards, and an average of two patients per day is refused admission because of crowded conditions.



## Problems Pertinent to Local Medical Societies Are Pointed Out in Illuminating Report of Special Cleveland Committee

Crystalizing the idea of modern organization as applied to local medical societies, their function, scope, activities and service to their members, a report of interest to every physician in Ohio, was recently submitted to the Cleveland Academy of Medicine by a special committee, appointed to diagnose the economic, social and political problems confronting the profession in that city and to suggest remedies.

Closer contact with civic and political affairs, together with means of accomplishment, were the outstanding recommendations of this committee, which was composed of Drs. George E. Follansbee, chairman; C. L. Cummer and R. K. Updegraff.

While it is not expected that many other academies or county societies will find it possible to reconstruct themselves along the substantial and rather elaborate lines suggested in this report, the facts set forth and the problems discussed are applicable to every community in the state in a greater or less degree.

Being of such general interest in its conception of local medical organization functions, the report, entitled "The Future of the Medical Practitioner," practically in its entirety, is reproduced below:

### PRESENT OBJECT OF ORGANIZATION IN THE PROFESSION

Up to the present time the primary if not the sole object of organization in the medical profession has been the diffusion of medical knowledge to the end that the population should best receive the benefits of the discoveries and advancements made in the science of healing. The benefit to the individual member of the profession has been in his opportunity through such organization to increase his own knowledge and perfect his own methods for the sole purpose of rendering better service to his clientele.

Organized medicine has scarcely concerned itself with the financial side of the practice of medicine except in a half-hearted way to decry the abuse of contract practice. It has ever held that to discuss or consider the financial aspects of professional work has been inconsistent with its altruistic ideals. Nothing could be farther from the truth.

### POWER OF OTHER ORGANIZED BODIES

Meanwhile society in its various component parts, has not been content to remain at a standstill. Organization has been used to promote the material welfare of the members of different groups, and to make the influence of these groups as such felt. "In union there is strength" has been the slogan that has guided these various organizations of trades, businesses or movements to phenomenal success. It is hardly neces-

sary to mention the various trade unions and what they have and are accomplishing for their members. To realize what these unions have accomplished for their members one has but to pay the bills for building a house with union labor; and if one wishes to determine the extent of their power let him try to build a house with non-union labor, or introduce a non-union subcontractor or a non-union piece of material on the job. If this is not enough, let him remember that only three or four years ago a union composed of only a comparatively small number of men boldly went to Washington and gave the President of the United States a limited period of time to see that their demands were complied with, under a threat of a complete and disastrous paralyzation of the transportation systems of the country; and that the President and the Congress bowed to their masters and did their bidding.

The different companies or individuals engaged in the same line of business have found that they must organize as a unit for the benefit of their type of business. As individuals they may be competitors, but they find that an organization which embraces them all is an essential. As example may be mentioned "The Iron and Steel Institute," "The Mine Owners Association," "The Electrical Manufacturers Association," "The Builders Exchange," "The Real Estate Board," and many others.

### EXTENSION OF ORGANIZED EFFORT INTO ALL FIELDS

Movements connected with education, religion, philanthropy or what not have found that in organization is their great success. Experience has taught that the Community Chest will raise more funds with less effort than the separate appeal of a hundred of its constituent units; that the National Red Cross can easily do what its individual chapters could not even attempt; that even the churches can promote their propaganda far more effectively if combined into a Federation of Churches.

All of these organizations use publicity to promote their objects. They shout with headlines in the papers. They do not let it be forgotten that they are on the job, are doing things.

Take from the daily paper all the items in which an organization is the principle person and the paper will look very white. On Saturdays the Federated Churches at least one page; every day the dealers and manufacturers of electrical supplies two full pages; baseball, at least one page, and other organizations and interests lesser amounts, but very numerous.

They are all, moreover, working for their own class interests. They take their own interests very seriously. They believe that a thing which

is worth doing is worth doing well. Therefore, they do not intrust their vital interests to well-intentioned, philanthropic members who may be willing to donate such part of their time as their feeling of responsibility dictates as sufficient to discharge the obligation they have assumed, but they employ trained and competent men for their needs and, having paid them well, demand results. They have no pigeonhole labelled, "Excuses." Of course, this requires money, much money, and they assess themselves accordingly. That it pays is self-evident; otherwise they would not continue doing it.

Only the great medical profession, as widely as it touches public life has been blind to the desirability of such influential participation in community life, and has failed to appreciate that the trend of the times in all other professions, businesses and trades is toward a policy of publicity, assertiveness and aggressiveness in pushing the profession, if not the individual members of it, into the life of the community.

Ministers and churches have found the plan profitable for religion. They obtain publicity for their organizations and objects in the press and through their organization, the Federated Churches make their influence felt in public matters touching their interests. The attorneys have their Bar Association and do much in the management of their profession and the education of the public in legal matters through the papers. All conduct their activities through a full-time, paid official.

#### PRESENT STATUS OF THE ACADEMY AS A PUBLIC BODY—ITS LACK OF INFLUENCE

Let us take stock of the medical profession of Cleveland, the sixth or possibly even the fourth city in point of population of the United States.

The Academy of Medicine as at present organized is designed and conducted to provide for the scientific needs of its members and to make the influence of the profession in public health matters mildly felt.

The scientific needs are met by Academy and Section programs as successfully as would be possible under any other plan, the degree of interest rising and falling from time to time in inevitable fluctuations, as matters of paramount interest outside the profession come and go, and as the programs prepared appeal or not to the popular interest.

In its relation to the public the influence of the Academy has been exercised through standing committees on Public Health, Civic Affairs, Legislation and an Academy appointment on the Milk Commission. Individual members have been appointed to responsible positions, but they have always represented themselves only. They have not been official representatives of the Academy.

For years the effect of the activities of the Civic and Public Health Committees has been

negligible and the value of the Legislative Committee has been limited. During times of pending legislation inimical to the public health the chairman of the Legislative Committee has been obliged to work absolutely without regard to the demands of his own personal affairs. His efforts have not been without effect, but it is notorious that the Cuyahoga delegation, in spite of this work, has been largely on the wrong side when the votes were cast.

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The profession as an organized body has been ignored in city affairs about matters pertaining to medicine, and through loose and inefficient organization has had no effective protest. We have simply been treated as though we did not exist. We have no influence politically because it is recognized that we do not have an organization sufficiently active to make us a unit. We can be safely ignored because we are a mob, not an army. Could we be united on what we want and had we influence to make our wants known and to show that we were a unit in these wants, we could then have as much power in city affairs as any "local" of the International Hod Carriers' Association. We could then say: "I want what I want when I want it," and get it!

In State affairs the profession has not been consulted, but by having an efficient, well paid, full-time employee to attend to its interests has forced itself to be heard and has made its influence felt to the benefit of the public and of itself. This has been only possible because it has been the business of the Executive Secretary to attend to these matters, and because this business has been the only business which this employee has had and for which he has been adequately remunerated. The State Association has not been his "side line."

The medical profession has drifted into its present innocuous position because it has held to ideals of modesty, self-effacement and unselfish helpfulness to humanity. These ideals should still be the ideals of the individual members of the profession, but if the profession as a group, a class, a unit in civic life is to obtain the influence and enjoy the prestige in the community to which its membership entitles it, it must adopt some more modern methods. Modesty and self-effacement of the *individual* should be practiced as becomes our profession, but *our profession itself* may well be unhidden from under its bushel and brought to the attention of the public through the press, and to the law-making and law-enforcing branches of the government through the compelling influence of a compact, aggressive, efficient organization.

#### ESPECIAL NEED FOR AN EFFICIENT ORGANIZATION TODAY

There has been prepared and introduced into the Legislature the "Myers Bill," providing for compulsory health insurance. That there will



within a short time be passed this bill or a similar one no one in touch with legislation doubts. No matter what the profession or any of its individuals may think about the advisability of such a plan, it is considered a certainty by those best placed to judge, that such legislation will become law.

Under the provisions of this bill as presented would come every man, woman or child who works for another or for a company and receives a salary or wages, and their dependent families, except executive officers of corporations, farm laborers and domestic servants. It provides that all are entitled to benefits alike, except that the wage earner, in addition to all benefits which his dependents receive, shall receive compensation for loss of wages. These benefits include ordinary medical service at home, hospital or office; surgical or other specialists' services as needed; obstetrical service; X-ray service; laboratory service; dentistry; nursing; ambulance; medicine; glasses; appliances; apparatus; dressings and whatever may be needed in the care of the sick. And the State pays for it, *at its published schedule of fees!*

Eighty per cent. of the practice of medicine in the State, and practically 100 per cent. of that in the cities will be affected by this bill. There may be a few men who have reputations so established that they think their practices will not be affected if they refuse to work for the State under the fees allowed. But they are few, and they will find their practices diminishing more and more as time goes on and people learn that the State will furnish to them without cost apparently satisfactory service, though possibly without the glamour of a brilliant name. But ninety-nine out of every hundred in the profession will get their living directly from the State, and for each one of those ninety-nine it will be economic suicide to refuse to work for the State.

If the interests of the profession are properly safeguarded in the formation of the bill, before it becomes a law, state medicine might be a good thing for the individuals in the profession, but if those interests are not safeguarded during the passage, the law will be just so much more harmful than the accident compensation law was to the doctor when it was passed, as the health bill is wider in its general application.

To see that we as a profession and as individuals are properly cared for, as well as made use of in the pending bill—and in working for our own interests in this matter we are also benefiting the public, for nothing is so dear for a sick person as cheap medical service—a compact, aggressive and efficient organization is needed.

#### MAKING OUR ORGANIZATION EFFICIENT AND INFLUENTIAL

The profession can make a compact organization within and of itself, but it cannot make that

organization either aggressive or efficient unless it employs to carry out its policies, to attend to its details, to anticipate its needs, and to guide its deliberations, a thoroughly competent executive.

There may be many such executives in the Academy. They are not available. A doctor with the necessary qualifications is already too occupied with profitable work to afford the time, thought and work which this position demands. If any medical man has the time he has not the ability or he would not have the time.

The time is now ripe for entering on such an innovation for the Academy. With a membership of over 500, and this membership steadily increasing, the duties of the secretary have already become so onerous that a member of the profession can no longer be expected to sacrifice to the position the time which the office deserves.

The secretaryship as at present handled cannot itself keep properly informed nor inform the members concerning matters in city, state and nation which are vital to our interests. At the present time issues of paramount interest to the profession as a whole, as well as vital to the health of the community are receiving no adequate consideration at the hands of those who are finally responsible for safeguarding the health of that community.

The influence of the Cleveland Academy of Medicine, if exerted through such efficient channels would be of immense assistance to the State Association in its work on pending vital legislation. If this Academy should adopt this plan, the larger cities of the State quite possibly would follow our example, and if they should, the Legislature could not fail to listen to the profession respectfully and grant our just demands. The State Association has at the present time, as well as in times past, a great amount of influence at Columbus, but how much greater and more effective would that influence be if its representatives before the committees were backed up by the presence of forceful, permanent representatives from Cleveland, Cincinnati, Toledo, Columbus and Dayton, or if not by all of them by representatives from Cleveland and Cincinnati, or even from Cleveland alone. And the doctors of Ohio, if thus represented by compact, aggressive organizations would be in position to make demands and compel them to be granted, for the whole plan of Health Insurance pivots on the employment and co-operation of the physicians. Without the medical attendant there can be no health insurance.

#### DUTIES OF AN EXECUTIVE SECRETARY UNDER THE PLAN

A local organization such as outlined would be very influential in local health legislation, and in the activities of the health division of the city government. The executive secretary would have the time and it would be one of his duties

to keep himself and the Academy committees posted on all those matters touching the profession that we but vaguely now understand, and about which we take no interest until we find them interfering with our prerogatives or wounding our sensibilities. He would be our representative to obtain information and correct abuses, to educate the city officials in their duties to the profession and the profession in its relation to the city government. He would obtain information for the Academy committees in matters under consideration and would arrange for their appearance to be heard where representation by committee would be desirable. He would attend to the details of committee work. He would himself be a representative of the Academy before legislative bodies and be able through his thorough knowledge of the subject and his firm belief in the justice of the cause he represents to convince his hearers of the correctness of his con-

tentions. He would be the means of co-operation with other associations closely allied or interested with the medical profession, such as the Dentists' and Druggists' Associations. The co-operation with them would strengthen both them and us.

The executive secretary would be in charge of the headquarters of the Academy and would distribute promptly to the various committee members interested the information which he gathers and which comes to his office, so that our committees instead of hibernating from January to January would be in possession of timely information and advice which would furnish them activity and accomplish results for the profession, which until this time we have only wished for, much less hoped for or expected.

He would do much toward unifying the ideals and aims of the different members of the Academy, to promulgate a spirit of union, of helpfulness and loyalty among the members.

### Ophthalmic Examination Announced

The American Board for Ophthalmic Examinations will hold its next examination at New Orleans on April 26, at the time of the meeting of the American Medical Association. Ohio candidates who wish to take the examination for the certificate of the board must have their applications and necessary credentials in the hands of the secretary, Dr. William H. Wilder, 25 East Washington Street, Chicago, at least sixty days before the date of the examination. A candidate may file his application and postpone his examination until the board holds an examination within a convenient distance of his home.

This board, it should be explained, consists of nine members, three each from the American Ophthalmological Society, the Section on Ophthalmology of the American Medical Association, and the American Academy of Ophthalmology and Oto-Laryngology. It grew out of recommendations of a joint committee appointed by these societies in 1913 to report on Ophthalmic education which also recommended that first class medical schools establish graduate courses in Ophthalmology leading to an appropriate degree, and that these courses represent not less than two years of systematic work subsequent to taking the degree of M. D.

The functions of the board are (1) to establish standards of fitness to practice Ophthalmology; (2) to investigate and prepare lists of medical schools and hospitals, and private instructors recognized as competent to give the required instruction in Ophthalmology; and (3) to arrange, control and conduct examinations to test the qualifications of those who desire to practice Ophthalmology, and to confer a certificate upon those who meet the established standards. No attempt is made to control the practice of Ophthalmology by any license or legal regulation, and no degrees are conferred, this function being rightfully left

with the universities. It simply aims to establish a standard of fitness to practice Ophthalmology, and to certificate any who voluntarily apply and satisfy the board of their qualifications.

The value of the certificate is indicated in action recently taken by influential organizations, which will doubtless be followed by other societies. The American Ophthalmological Society and the American Academy of Ophthalmology and Oto-Laryngology have voted that after 1920 they shall require every applicant for membership to possess the certificate of the board, unless he shall possess a degree in Ophthalmology conferred by a university recognized by them as competent to prepare students for such a degree. The American College of Surgeons will, upon recommendations of its credentials committee, admit to Fellowship in the College without further examination an applicant who has passed the examination given by the Board.

There is reason to believe that the certificate of the board is likely to be required of candidates for appointments in many and various important positions; hospital trustees and other laymen may be glad to avail themselves of this means of judging the fitness of candidates for positions under their control. Lastly, it is expected that the medical public and the lay public will learn to discriminate better between those who are well fitted and those who are not, and will be influenced by the certificate of the board in arriving at their conclusions.

The fee for examination is \$25.00 but its payment is not required before the board is ready to issue the certificate. Applicants are divided into three classes according to the length of time they have practiced Ophthalmology—those who have practiced ten years or more; five years and less than ten years, and less than five years.



## Compulsory Health Insurance --- Its Promises and Its Dangers, Discussed by a New York Physician from Numerous Angles

Before a recent meeting of the Committee on Public Information of the Medical Society of the County of Schenectady, New York, Dr. E. MacD. Stanton of Schenectady, chairman of the committee, rendered a most interesting discussion of the above subject. Dr. Stanton has given the subject of health insurance much study and is, therefore, in a position to discuss it from various angles which concern the laity as well as the medical profession. On account of the similarity of the health insurance proposals in New York and Ohio his comments are particularly interesting.

In the presentation, quoted below, he has endeavored to answer the all important question—Is health insurance a measure of economic conservation or an old fashioned "gold brick?"

"For several years an organization, known as the American Association for Labor Legislation, has been conducting in this country an active campaign for compulsory health insurance. This organization has been particularly active in New York State where they have succeeded in converting to their cause our Governor, several members of the Democratic State Committee, the officials, at least, of the New York State Federation of Labor, and, superficially at least, many of the woman's clubs, uplift organizations, and other bodies.

"On paper the promises of those advocating compulsory health insurance are certainly attractive. The New York bill known as the Davenport Bill promises that 'Every insured person shall be entitled to receive as minimum benefits from the fund to which he belongs: Medical and surgical attendance and treatment, attendance by visiting nurses, medicines and medical and surgical supplies, hospital or sanatorium treatment and maintenance; dental services; cash sickness benefit; cash maternity benefit; funeral benefit.' This sounds like a medical Utopia and because the vote for and against the project in the State Legislature, this coming winter, will undoubtedly be close, it is very important that we determine whether this is really a step toward better things or just an old fashioned 'gold brick.'

"The propaganda for this measure has been carried on so far with a minimum of publicity. The agents of the American Association for Labor Legislation have for the most part gone direct to the heads of the organizations they have desired to influence. Take, for instance, the New York State Medical Society. Three years ago it was suddenly discovered that the American Association for Labor Legislation had converted one or two of the State officials, and the next thing the State Society knew there was an almost successful attempt made to use this as a basis for claiming that the State Medical Society had in-

dorsed the project, although at that time 90 per cent. of the fifteen thousand members of the profession in this State had scarcely heard of such a thing as compulsory health insurance.

"I am quite sure that, if the members of this audience take the trouble to look into the matter, they will find that a number of the clubs or organizations to which they belong have gone on record in favor of compulsory health insurance, after no more careful investigation than a brief talk between one or two of the officers and an agent of the American Association for Labor Legislation.

"We can get some idea of the tremendous importance of this measure when we stop to consider that there are in this State about 4,000,000 wage earners who are supposed to lose about nine days a year each from sickness. If all of the numerous and somewhat luxurious benefits mentioned in the bill amount to only three dollars per day, we would have the stupendous total of \$118,000,000 to be distributed annually through a semipolitical organization created by the Compulsory Health Insurance Bill and controlled by the party in power. If we include the dependent members of their families the figures will be much larger. There would be thousands of inspectors and other salaried employees. In fact the administrative expenses to be borne by the State must increase to a tremendous extent the amount to be raised by taxation.

"Important as are the financial considerations, they fade almost into insignificance when we consider the fact that with the adoption of this legislation we unquestionably reverse the very foundations of the policy of the State toward the individual. Instead of a policy calculated to stimulate individual initiative and self-help we substitute a policy of control of the individual and State help.

"With some realization of the importance of our subject let us turn again to the promised benefits. All working people and the dependent members of their families adequately insured against the irregularly distributed risks of sickness and the financial losses incident thereto. If compulsory health insurance would really accomplish what its advocates promise, and do this without introducing other and greater evils than those it intends to correct, then it should be adopted. If, on the other hand, after thorough and unprejudiced investigation the plan is found to be of the nature of a political gold brick, then it should be rejected once for all, and we should turn our attention to other and more practical plans for solving the problems at hand.

"There are many points from which we might begin the study of our subject, but in our first

preliminary survey certain pertinent questions must come to our minds.

"In the first place, if the problems of sickness and the economic suffering incident thereto can be solved as easily as the lay experts in things medical who compose the American Association for Labor Legislation say it can be, why is it that up to the year 1919 not a single State in the Union has adopted compulsory health insurance as a public health policy? It has been in force in Germany for more than thirty years and much of this time we were very busy copying things of German origin. Surely if it brought about the medical millenium it promises it would have produced the good effects in Germany, and some State of our Union would have adopted it many years ago.

"Between 1883 and 1914 we have a period of 31 years in which the system was in force in Germany and during this time tens of thousands of American physicians were studying there and absorbing all that was best in German medicine. Thousands of these men are now engaged in public health work throughout this country, and yet to this very day I have not heard one of these men suggest that compulsory health insurance might be a good thing for this country or any single element of the population of this country. In all history of the civilized world I know of no single example where the medical profession has failed to support a measure which in its judgment was calculated to lessen disease or lessen the economic and social hardships produced by disease. If compulsory health insurance is what the lay experts in things medical claim for it, why is it that none of the thousands of American physicians who studied in Germany had or have a good word to say for it? It seems to me that this is a fundamental question, but I will return later to the attitude of the medical profession toward this subject.

"In the second place it is worth noting that the so-called experts of the American Association for Labor Legislation have been struggling for at least six and probably ten years in an attempt to formulate a workable draft of a bill. I wish I had time to take up in detail the twenty or thirty differently modified bills which have been introduced into our various State legislatures. Suffice it at present for me to say that I spent much of my spare time for two years trying to devise a practical bill which would accomplish just a small fraction of the results desired and that it was my failure to make any headway in this effort, using the bills of the American Association for Labor Legislation as a basis, which finally led me to the realization of the fact that the whole scheme is fundamentally wrong. Take, for instance, the Davenport Bill, which passed our Senate last winter. It starts out by promising great things as I quoted in my opening paragraph. Almost immediately, however, it excludes from the alleged benefits of the bill all of

those persons most needing help, namely, the farm laborers, the domestic servants, the majority of day laborers, the unemployed laborer, the man who works for a small concern having less than eight employees and, listen to this, all those employees for whose benefit an employer, in the judgment of the Industrial Commission, maintains at his own cost and without recourse to insurance, a system, fund, or plan, which guarantees to such employees benefits substantially the same as the benefits they would receive if insured under the provisions of this system. Does anyone believe that this would mean health insurance? No, it would mean that our larger companies would be forced by the exigencies of the law to return to the long ago discarded plan of the company doctor with all the evils and dissatisfaction attendant thereon.

"The company doctor is an old plan. We do not have to repeat history with this experiment which has never been able to survive in this country, except in frontier camps and localities not yet adequately supplied with independent physicians.

"A third question which comes up at the very beginning of our study is, Who is behind this movement? None of the parties most interested, namely, the workingman, the employer, or the medical profession, has ever declared in favor of the plan. At least 90 per cent. of the propaganda in its favor can be traced directly to the American Association for Labor Legislation. Concerning the American Association for Labor Legislation I can give you little information. At the 1919 annual convention of the American Federation of Labor, one and only one resolution in regard to compulsory health insurance was passed and it reads as follows:

"Whereas, During the past few years great efforts have been made to obtain the approval and support of organized labor to a scheme for Social Health Insurance, promoted by persons and organizations who have no affiliation with labor movement; and

"Whereas, Owing to the intensive and costly campaign which the promoters of this scheme have carried on during the past two years, at one time seeking to have this legislation adopted in twenty-eight different States, suspicion has been aroused that this scheme is supported by those who, for years, have sought to disrupt and retard the cause of the workers; and

"Whereas, The Executive Council in their report, submitted to this convention, have pointed out the necessity of investigating this matter; and

"Whereas, We believe that the best interests of the Trade Union Movement demand that an immediate investigation be made of the subject in order that the workers may be authoritatively advised of the benefits or dangers of this scheme and the advisability of supporting or rejecting it; therefore be it



"Resolved, That the Executive Council are hereby instructed to make an immediate investigation of this question and to point out its dangers or benefits with their recommendations thereon as soon as possible, and the Executive Council are further instructed to ascertain, if possible, what are the financial resources of the persons and organizations promoting this scheme, and what relation they may have with those interests who are opposed to the best interests of the labor movement; and be it further

"Resolved, That the report of the Executive Council on this subject and their recommendations thereon be printed in the American Federationist when completed."

"At the 1919 convention the Executive Council failed to make a report and suggested that more time be allowed for the investigation.

"Concerning the personnel of the American Association for Labor Legislation it is interesting to note that it is composed of a group of lay uplifters, none of whom, as far as I can ascertain, has ever had any objective experience with disease or the effects produced by disease. It is certainly true that any dozen active general practitioners see more of disease and the effect of disease in a week than the entire active membership of the American Association for Labor Legislation does in a year. These lay experts repeatedly assert that compulsory health insurance is an intelligent attempt to lessen the incidence of disease and ameliorate the sufferings produced thereby. Yet it is worthy of emphasis that to date not a single one of the many public health bodies in this country has actively endorsed the scheme, and yet those bodies are composed of men many of whom have devoted a lifetime to studying the problems of how to reduce sickness and lessen the evil results produced by sickness. Most intelligent attempts to accomplish a great purpose are at least sanctioned by those who know best the problems at hand.

"I have mentioned some of the problems which confront us at the very beginning of our study of this subject. I believe that I have at least indicated that there may be some very valid reasons why real experts in things medical are a practically unanimous unit in opposition to the Compulsory Health Insurance Bill. In this State we have a great group of more than 15,000 men who are experts in things medical. Never before have they been found opposed to any measure which in their judgment was calculated to improve the condition of the sick or lessen the sufferings related to sickness, and yet today we find at least 14,500 of these real experts firmly of the opinion that compulsory health insurance is little more than a political gold brick. The reasons for this opinion are many. They apply to almost every feature of the bill, but the time allowed me is limited and I believe that we can ignore statistics and conflicting detail and pro-

ceed at once to certain fundamental objections which will at least give an insight into the uselessness of trying to take a project which is hopelessly bad and make something worth while of it.

"Compulsory health insurance is unquestionably an attempt at uplift legislation. Now attempts at uplift legislation did not begin in 1919. For centuries lawmakers have been trying to accomplish similar objects, and history very conclusively shows that there are certain fundamental requisites for success of legislation of the type advocated by the compulsory health insurance enthusiasts. First, the law must be fundamentally just. It must not rob Peter to pay Paul. Second, the law must not of itself work directly contrary to those fundamental traits of human character which go to make good citizenship. There are other requisites, but if we study the compulsory health insurance bills of the type advocated by the American Association for Labor Legislation in their relation to these two standards, I believe that we shall be able to get a true measure of the project.

"First, let us see if compulsory health insurance of the type advocated by the American Association for Labor Legislation is fundamentally just. The Davenport Bill reads: 'The cost of insurance provided by this chapter for employee members shall be borne one-half by the employer and one-half by the employed person, provided that in case the weekly earnings of the employee are less than nine dollars, but more than five dollars, the contribution shall be borne three-quarters by the employer and one-quarter by the employee, and provided that the weekly earnings of the employee are five dollars or less, contributions shall be borne entirely by the employer.'

"The compulsory health insurance advocates tell us that compelling the employer to pay for health insurance is only a natural step from the principle of the compensation legislation. The compensation legislation, however, only compels industry to pay for the damage done by industry. In order for compulsory health insurance of the Davenport Bill type to give fundamental justice at least approximately, one-half of sickness must be due to industry. In this world of ours it is best to recognize facts as they are and in this case the fact is that industry cannot properly be charged with one one-hundredth of ordinary sickness. In New York City in the four years from 1915-1918 a special effort was made to have all cases of industrial illness reported. During this period the hospitals, private physicians, and the Public Service Commission reported just 322 cases of industrial disease. For the sake of being on the safe side let us suppose that the doctors, the hospital authorities, and the health authorities did not know their business and that there were really 100 times as many cases of industrial diseases as were reported. This will give us 32,200 cases, but during this period there were at least 12,000,000 cases of illness requiring medical at-

tention. This would give us not 50 per cent., but 1-3 of 1 per cent. of disease due to industry.

"The meaning of all this is self-evident. The so-called compulsory insurance is not health insurance at all, but only a thinly veiled scheme for forcing charity upon a portion of the community which neither requires nor desires charity. At the same time the people who ordinarily need charity—those chronically ill, the unemployed, the aged, the widows, the orphans—are not provided for at all. In fact they will be much worse off, for the available resources of the community will have been used in forcing charity upon the man with the job.

"Is it any wonder that such wise heads as Gompers, Stone, Hugh Frayne and others want to know the motives behind such legislation? From the days of the Corn Laws of England down to the present time I believe that history will fail to show a simple example of a law forcing charity upon employed working men which has not worked to the detriment of the working man and served ultimately to enslave him.

"Now let us see how this proposed legislation measures up to the second standard. DOES IT TEND TO ENCOURAGE THOSE FUNDAMENTAL TRAITS OF HUMAN CHARACTER WHICH GO TO MAKE GOOD CITIZENSHIP?

"Any law which says on the face of it that industry is responsible for at least one-half of sickness cannot escape the fact that it teaches every man, woman, and child in the State that it is unhealthy to work. Just picture for yourselves the ultimate effect of a law passed in the guise of economic conservation which teaches the doctrine that it is unhealthy to work. Compulsory health insurance in Europe has had two chief effects. It has tended to enslave the workingman and it has tended to increase the number of days lost from real or alleged illness. The statistics on this last phase of the subject are very abundant, but it is not necessary for us to go to Europe for confirmation of the effects of teaching the doctrine that it is unhealthy to work. For many years before the war the immigrants coming from compulsory health insurance countries presented a peculiar solicitude in regard to the relation between sickness and work that is generally interpreted as a tendency to malingering. I believe, however, that it represented a far more basic psychological state. They had been taught by the laws of their native lands that to work is unhealthy.

"In my last paragraph I referred to the fact that compulsory health insurance had tended to enslave the workingman. I wish that I had time to go into this phase of the workings of the law in Europe. It is interesting to note the fact that nearer by, in one of the West Indies, they have a system known as 'indenture.' Now 'indenture' is only a euphonious name for slavery and the 'indenture' I refer to is made possible by a highly

developed system of health insurance made compulsory by the planters and sugar companies of the island. The 'indentured' individual received in the year 1919 a daily wage of approximately 25 cents."

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### Ohio's System of Sanitary Control Over Water Supplies Equaled Only by One State

Ohio shares honors with Massachusetts in leading the nation in state sanitary control of public water supplies, with a score of 97 per cent. perfect, according to a grading established by the United States Public Health Service.

Protection of Ohio citizens against water-borne diseases is effected by law providing for state inspection and approval of all public water supply projects and for state examination and supervision of supplies in use.

Under laws in effect since 1893, no public water supply may be installed or used in Ohio until it has received the approval of the State Department of Health. Control of existing supplies by the same department is exercised by means of monthly reports from all the 50 purification plants in the state, by frequent inspection of such plants, by semi-annual examinations of all supplies which are used on railroads and by intermittent examinations, annual or more frequent, of all other supplies.

Allowing for all sources of possible danger, but 50 of the state's 300 public water supplies are of unquestioned purity. Only about 10 per cent. of the 4,000,000 people served by public water supplies use water from doubtful or unsafe sources. Eighteen communities, with a population of 100,000 have water supplies definitely classed as unsafe. These use unpurified surface water, from systems installed before 1893, when the first supervisory legislation took effect. The largest cities on the "dangerous" list are Wellston, Wellsville, Piqua, Fostoria and Fremont. In the three cities last named improvements are under way.

Other factors of danger are introduced by the lack of expert technical supervision in some of the smaller purification plants and by the existence of emergency intakes in several communities, by which untreated surface water may at times be pumped into otherwise safe supplies.

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#### PROCTOLOGISTS MEET IN APRIL

The American Proctologic Society will hold its twenty-first annual meeting at Memphis, Tennessee, on April 22 and 23. Dr. Collier F. Martin of Philadelphia is president of the society, and Dr. Ralph Jackson of Fall River, Massachusetts, is secretary.



# THE CANCER CAMPAIGN

This department was inaugurated by the State Association's Committee on Control of Cancer for the purpose of keeping the profession in touch with the intensive campaign it has undertaken with a view to curbing the cancer menace. As part of the movement members of the committee have personally addressed, or have secured speakers to address a large number of county societies on this subject. If societies which have not devoted a meeting to the cancer question during the fall or winter, but are desirous of doing so, will communicate with State Association headquarters, naming a suitable date, the committee will arrange for speakers. The current paper is the sixth of a series prepared by Dr. Crotti to emphasize the fundamentals in cancer diagnosis and treatment.

## COMMITTEE ON CONTROL OF CANCER



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Columbus

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Columbus

## Cancer of the Thyroid

Andre Crotti, M. D., Columbus

Chairman Committee on Control of Cancer

**I**N 90 per cent. of the cases malignant goiter develops in an already existing goiter. A malignant tumor developing in a normal thyroid is rare; if it does, it is nearly always a tumor of connective tissue origin, as sarcoma, endothelioma, etc.

Malignant goiter occurs mostly between the ages of forty and sixty years. It has been found in younger people, even in children ten to twelve years old, but this is certainly not common.

Sarcoma is more frequently found in young people, cancer in old ones. Malignant goiter is more frequently found in women than in men, and it occurs mostly at the menopause, hence the absolute necessity of removing any goiter which at this time of life begins to grow. Infectious diseases seem to have a certain etiological influence on the development of malignant tumors of the thyroid; for instance, malignant degeneration not infrequently follows a spell of grippe.

*Course and Symptoms*—The development of cancer may be acute or sub-acute.

In the *acute*, or fulminating form, the development of the malignant tumor is extremely rapid. In three or four weeks it may reach such a development as to cause alarming symptoms of suffocation. This form of malignant goiter occurs in young people and is often mistaken for acute thyroiditis. It is rare.

Usually the development of malignant tumor follows the *sub-acute type*. It occurs in patients who previously had goiter, which may have been stationary for years. Some day, however, without any apparent cause, it begins to *grow with comparative rapidity*. It soon interferes with respiration, the voice becomes rough, harsh and rapidly bi-tonal; deglutition is slightly difficult; shooting pains are complained of, especially toward the ear and along the cervical and brachial

plexuses; *the limits of the goiter become less sharply outlined*; the tumor becomes adherent to the neighboring tissues and grows downward toward the mediastinal space. Finally the goiter *loses its previous softness and becomes hard*, a symptom of great diagnostic value.

Gradually respiration becomes more difficult. A barking cough grows frequent, and paroxysmic choking spells soon dominate the scene. These suffocating spells are always horrifying to witness. The face and neck are congested, the veins distended; the eyes protrude, and the patient makes desperate efforts to get his breath. His hands massage his neck as if he were trying to remove the pressure. Gradually the tracheostenosis grows tighter, the tracheo-bronchial catarrh becomes more and more tenacious, and finally the end comes.

When the malignant degeneration has already progressed beyond a certain degree, there is on the anterior and superior portions of the thorax a collateral circulation showing that the return flow of blood toward the heart is impaired. The veins are widely distended. Sometimes one may run across a cancer of the thyroid in which pulsations synchronous with the heart beat are distinctly perceived, so that one thinks of an aneurysm. This is due to the fact that the return flow of blood is greatly impaired on account of partial thrombosis of the thyroid veins, consequently the impact of each new arterial arrival of blood is strongly transmitted through the congested, solid tumor. This form of cancer is called *aneurysmatic cancer*.

Dysphagia is one of the early symptoms of cancer of the thyroid. Not infrequently compression is accompanied by spasms of the esophageal musculature. In such conditions the swallowing

of liquids, especially when cold, is as difficult as the deglutition of solid food.

Compression of the inferior laryngeal nerves, of the vagus and especially of the sympathetic is frequently seen in malignant tumors of the thyroid.

Metastases must be carefully looked for. Metastases of malignant goiter, whether of epithelial or connective tissue origin, may take place through the lymphatics or through the blood vessels. The general formula applied to malignant tumors when speaking of their dissemination: "Hematogenous route for sarcomata, lymphatic route for cancerous tumors," does not hold good here.

Metastases of carcinomata occur more frequently in bones than metastases of sarcomata. In both varieties metastases in the lungs and bones are very frequent; metastases of malignant thyroid tumors show a marked predilection, first, for the skull, then the pelvis, sternum, femur, clavicle, lower jaw, and the shoulder blade. Metastases in bones, as a rule, are not multiple.

That thyroid metastases are capable of normal physiological function is a very well known fact. Classical is the case of Von Eiselsberg who performed a complete thyroidectomy for a malignant tumor. Nothing worth notice followed the operation, but later on, when in a subsequent operation a metastatic nodule was removed, marked symptoms of myxedema soon developed.

The blood formula found in malignant tumors of the thyroid does not differ in any way from the one found in malignant tumors of other organs.

Symptoms of thyroid insufficiency in connection with malignant degeneration of the thyroid are not so frequent as one would expect. The reason for this is mostly because the entire gland is seldom involved. There remains nearly always enough gland to meet the physiological demands. And then, too, we know that malignant cells of the thyroid have not lost their physiological properties and are still capable of normal function.

Symptoms of hyperthyroidism — tachycardia, tremor and exophthalmos, etc.—have been noticed quite frequently in connection with malignant tumors.

Ordinarily we have to deal with a patient who has a goiter, which may not have given him any trouble thus far. Some day, however, without any apparent reason the goiter begins to grow rapidly and soon interferes with respiration and deglutition. Note, furthermore, that the patient is of middle age, a woman undergoing menopause, perhaps. Note, too, that the goiter has lost its softness, has become irregular in surface and peculiarly hard. This is enough to warrant a diagnosis of malignancy. If we add to this that the goiter has lost its sharp limits, that shooting pains are present, that the inferior laryngeal

nerve has become involved, then the diagnosis of malignancy becomes almost certain.

Rapid increase in volume of a quiescent goiter and changes in its consistency are two excellent signs of malignant degeneration. What is true of the uterus is also true of the thyroid. If after menopause a uterus, which has remained in a quiescent stage for some time, begins without apparent reason to bleed, the chances are great that we have to deal with a malignant degeneration of that organ. The same is true of the thyroid. If a goiter, after a period of apparent inactivity, begins to grow, we must be on the lookout for every symptom tending to betray the malignancy of such a change.

Hemorrhages taking place at different intervals in a goiter might convey the impression that some malignant changes are taking place in that goiter. We will find rapid increase in volume, hardness, slight diffuseness of limits, shooting pains, slight temperature, etc., but further development will very soon show (in a very few days) which one of the two conditions, hemorrhage or malignancy, we have to deal with. Actinomycosis, tuberculosis and syphilis might cause the same syndrome but these conditions are far more rare than malignant degeneration. Woody thyroiditis might be mistaken for a malignant degeneration, but the mistake will be only beneficial to the patient as an early operation may save his life.

Differential diagnosis between carcinoma and sarcoma of the thyroid is not always easy. Sarcoma, as a rule, grows more rapidly, reaches larger dimensions, is softer and has a smoother surface than carcinoma. In sarcoma the skin is less adherent and its limits are not quite as diffuse as in cancer.

*Treatment*—There is only one treatment—the knife. All the other means are palliative, and disappointing. Even the "knife" does not always fulfill its promises.

Why is it that cancer of the thyroid, as well as cancer of the other organs, has been for so long a time considered beyond surgical reach? Simply because all these cases are operated too late, hence the high mortality. We have, however, learned that cancer can be fought with success if it is operated before the thyroid capsule has become invaded, the veins thrombosed, and the lymphatic glands involved. When the neoplasm is so encapsulated that it has not yet spread outside of its capsule and, consequently, has not involved the neighboring tissues, the chances for a happy outcome are very good.

We can properly say that the outcome of a malignant goiter lies within the power, not of the surgeon, but of the family physician. He is the one who sees these cases first; he is the one to treat them for months and months for simple goiter, before he realizes that something is undermining his patient. He is the one who should consequently be educated to know such conditions,



to differentiate them, and to make a very quick decision when once his suspicions have been aroused. Every physician should always have in mind the possibility of a cancer in connection with any tumor. This possibility should haunt his brain in every case; he should be a "cancero-maniac." The satisfied and dangerous optimism which is too often found, and which unfortunately too frequently finds its excuse in ignorance, should be discarded and replaced by an alarming pessimism. In that state of mind the physician will be able to catch the significance of any apparent-

ly slight physical change in the tumor, which, if properly interpreted may mean the saving of the patient's life.

When we have to deal with a patient of middle age whose goiter, without any apparent reason, begins to grow, causes some shooting pains and becomes hard, especially if this patient is a woman about the time of menopause, why wait until the entire cervical region has become as hard and rigid as a board and the patient is choking to death? In other words, why wait until it is too late to operate?

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## Greater Facilities for Study of Physical and Moral Delinquency Provided in New Quarters of State Bureau of Juvenile Research

Through the establishment of the Bureau of Juvenile Research in May, 1918, Ohio innovated and has since operated with success the most advanced policy of reclaiming juvenile delinquents that has been undertaken by any state or country. No longer are youthful offenders to be committed by the courts of this state directly to penal institutions, liberated after serving sentence, only to be recommitted time after time for offenses, actuated by sick minds, physical defects or home environments which the courts have been unable to comprehend.

According to Henry H. Goddard, Ph. D., director of the bureau, the problem confronting his department is nothing less than the putting of these children into the best possible condition to live lives of happiness and comfort to themselves and usefulness to society—in other words, these children must be saved, not punished.

Under the legislative act creating the bureau, courts of the state are now required to commit all minors needing state care to the State Board of Administration which turns them over to the new bureau for observation and study. Mental and physical tests and investigations of home environment are made to determine the underlying cause of delinquency and enable the department to prescribe proper medical treatment or commit the child to the institution in which his maximum happiness and usefulness can be attained.

Up to the present time the work has been handicapped by lack of facilities for caring for committed cases, the bureau having at its disposal only one cottage for housing children during observation. Another serious difficulty has been the inability to assign cases to suitable institutions after diagnosis has been made and institutional care prescribed, because of crowded conditions in state institutions. It is estimated that Ohio has 10,000 persons needing institutional care who should be provided for at the rate of 2,000 a year for the next five years.

Cases ranging from the plain, uncomplicated

feeble-minded to the normal child in whom no disease, mental defect or obviously bad environment can be found are referred to the bureau. In the former, diagnosis is, as a rule, easily made, and when made fully explains the delinquency. The solution in this case is care and training.

It is the apparently normal type that requires long observation and patient study. Nothing is more certain than that there is a cause for the delinquency in these cases, and it is equally certain that it is worth while both from the standpoint of justice to the child and the welfare of society, to find the cause, regardless of time and effort required.

In the grades between these two extremities there are many cases difficult of diagnosis. The psychopathic cases, for example, of which a number have come to the bureau, may give some symptoms upon first examination, but often require lengthy observation before the condition and its remedy are clear. Similarly, when the delinquency is suspected of being due to environment, the effect of a new environment must be tried.

The underlying cause for delinquency in the psychopathic group, the bureau finds, is largely a matter of hygiene and environment, and in the solution of these cases it is believed that the addition of a bio-chemist and neurologist to the bureau's staff will be of material assistance. In the meantime many of these cases, together with another group of those who show no disease and whose delinquency seems due entirely to bad home conditions, might be committed to a well-managed farm colony. A few of these children might be placed in private homes, but as yet the bureau has confined its efforts in this line to cooperation with the placing-out system of the Board of State Charities. It is believed that the placeable cases will be few, because the majority that come to the bureau require expert handling which few private families could give.

While the work thus far has been limited in

scope enough has been done to indicate the opportunities for good which are open in this field when an adequate personnel and facilities for treatment are available.

Only the most troublesome cases have been referred to the bureau by the courts, the number totaling 210. It is significant to note that of these cases, only 10 were diagnosed as normal; 108 were feeble-minded; 18 others feeble-minded, complicated by other conditions. Diagnosis in 47 cases was deferred. Of the latter number 42 were retained at the observation cottage with the result that 15 were declared feeble-minded and four normal. Final disposition was made of these cases as follows:

Institution for Feeble-minded.....	16
Columbus State Hospital.....	4
Boys' Industrial School.....	1
Girls' Industrial School.....	2
Paroled to parents.....	10
Returned to court.....	3
Placed in private families.....	4
County Children's Home.....	1
Paroled to work.....	1

In addition to its work of examining children committed by the courts, the law states that the Board of Administration may receive *any* child for examination, thus contemplating that the Bureau of Juvenile Research shall be an agency for prevention as well as cure.

Not being able, as previously explained, to care for many committed cases, the bureau has operated extensively under the preventive clause of the law, examining in the period from May 1, 1918, to July 1, 1919, a total of 1,901 children, including the 42 cottage cases referred to previously. These are classified as follows:

Referred by Courts .....	210	11%
"    "    State Board of Charities .....	114	6%
"    "    Schools for Blind and Deaf .....	69	3.6%
"    "    County Children's Homes .....	1047	55%
"    "    hospitals and physicians .....	47	2.5%
"    "    schools .....	283	14.9%
"    "    social agencies.....	92	4.9%
Miscellaneous .....	37	2%

Laboratory examinations were given to 421 of these cases, resulting in diagnoses of:

Feeble-minded .....	236	56.1%
Psychopathic .....	28	6.6%
Normal .....	29	6.9%
Precocious .....	16	3.8%
Potential feeble-minded .....	23	5.5%
Diagnosis deferred .....	89	21.1%

The children referred by the twenty-one county homes gave the following distribution:

Feeble-minded .....	383	37%
Potential feeble-minded .....	117	11%
Deferred .....	379	37%
Borderline .....	35	3%
Inferior normal .....	9	.9%
Normal .....	69	6.8%

Normal at present.....	20	2%
Psychopathic .....	4	.3%
Inferior psychopathic .....	1	.1%

The large deferred group is due partly to the fact that laboratory facilities were not available to complete examinations, which probably accounts also for the low psychopathic figure.

Thorough physical examinations were given to 170 children, disclosing 548 abnormalities, covering 38 different conditions and symptoms:

Malnutrition .....	66
Defective teeth .....	97
Tonsils and adenoids.....	78
Reflexes abnormal .....	42
Blood test positive.....	18
Defective hearing .....	12
Defective vision .....	70
Enlarged thyroid .....	23
Scioliosis .....	11
Tuberculosis .....	6
Gonorrhoea .....	5
Eczyema .....	2
Hemiplegia .....	1
Rhachitis .....	14
Trachoma .....	2
Epilepsy .....	5
Heart disease .....	5
Goitre .....	1
Acne .....	2
Furuncules .....	2
Nasal polypus .....	1
Ringworm .....	1
Scabies .....	4
Speech defect .....	2
Hernia .....	3
Positive rhomberg .....	7
Skin disease .....	20

Mr. Goddard conceives the function of his bureau to be quite as much to help in the making of superior citizens as to prevent the development of criminals, and it is his aim to build up a staff that will be equally helpful in both fields. It is hoped that as this function becomes known many parents who note peculiarities in their children will avail themselves of the bureau's service to explain the causal conditions and receive such suggestions for handling unusual children as the staff may be able to offer. It is pointed out that these peculiarities may not all suggest bad conduct—it may be a matter of wisely guiding and educating a gifted child. The physicians of Ohio are in a position to render valuable aid in acquainting parents or other agencies with this phase of the bureau's work.

The bureau is now settled in its new buildings on state land adjoining the Columbus State Hospital, where it has facilities for caring for children during observation. It is the plan to provide such personnel and equipment as may be found necessary for making thorough mental, physical and social investigations of the child's condition and environment. Such a personnel would doubtless include diagnosticians, psychiatrists, neurolo-



gists, pathologists, histologist, surgeons, roentgenologists and dentists.

No greater service could be rendered the citizens of Ohio than the clearing up of the physical defects of its unfortunate juveniles. With the list of physical and mental diseases noted above; with the mental weaknesses already described, and with the environmental conditions which are known to surround these children, it is apparent that they cannot be held responsible and regarded as criminals. "Every man is a rascal when he is sick" is the theory on which the Bureau of Juvenile Research is attacking its problem of overcoming delinquency by eliminating the underlying causes.

## MEETINGS OF THE CLEVELAND ACADEMY OF MEDICINE

(Lester Taylor, M. D., Secretary)

The one-hundred and fifty-eighth regular meeting of the Academy of Medicine of Cleveland was held in the auditorium of the Cleveland Medical Library Association, January 16, the president, Dr. R. H. Birge, in the chair. Attendance, 250.

The first paper on the program was by Dr. J. J. Kurlander, on "Treatment of Tuberculosis of Knee Joint."

The second paper was presented by Haven Emerson, M. D., who is in charge of the Survey of Hospitals and Health Conditions in Cleveland. He pointed out the relation between the standards of public health and the quality of doctors in any community; showing that while we have a deficiency in general hospital beds, especially for cases of tuberculosis, for orthopedic cases and convalescent patients, the beds provided for University Training were adequate. He advised the increase of staff members in various hospitals and outlined their functions. He also discussed the relation of the dispensary with the hospital and suggestions were made for remedying some of the present defects in Cleveland. The paper was discussed by Drs. Rosewater, Hoover, Oakes, Kuntzman, Bachman, Moorehouse and Emerson.

Dr. G. E. Follansbee read an important communication on "The Future of the Medical Profession," representing the work and ideas of a committee appointed by the council to investigate methods of protecting the medical profession from undesirable legislation and for increasing the activities and usefulness of the Academy. The necessity for a full time executive secretary was strongly presented, as well as a plan for financing the scheme.

A vote of thanks was given to the committee for its work and the report referred to the council.

## MEETINGS OF TOLEDO AND LUCAS ACADEMY OF MEDICINE

(J. F. Wright, M. D., Secretary)

The Academy of Medicine of Toledo and Lucas County held its regular meeting on January 23, 1920, in the recently acquired Academy Building. The program was in charge of the Medical Section of which Dr. H. G. Pamment is chairman, and was participated in by dentists of the city. Speakers and their subjects were: 1. Focal Infections in Relation to General Health, by Louis A. Levison; 2. Focal Infections as Viewed by the Roentgenologist, by Harry W. Dachtler; 3. Focal Infections from the Standpoint of the Dentists, by Drs. Lyons, Bunting and Rickert.

The discussion which followed the papers was interesting and instructive and members of the Academy appreciated the privilege of listening to the subject of focal infections from the dentist's viewpoint, the opinions of Drs. Lyons, Bunting and Rickert placing them with the conservative progressives in the question of extraction.

### ABSTRACTS

*Dr. Levison:* The location of focal infections is more apt to be in certain tissues but may be anywhere in the body. The tissues communicating with the mucous or cutaneous surfaces are more commonly involved. It is very difficult to link up definitely a discovered focus of infection with a certain systemic disease, because there is often the problem of multiple infections to complicate the situation. The conditions under which a focus of infection is found may be of greater importance than the focus itself, a focus otherwise harmless may be activated and rendered harmful by any condition which lowers the resistance of the body.

Dental foci often cause serious trouble and are easy to demonstrate. It will require close co-operation between the internist, dental surgeon, and the X-ray man to place dental infections on a definite plane. It does not follow that because the systemic disease does not improve after alveolar abscesses have been removed that the original infection in the teeth might not have caused the systemic disease. A secondary infection might become so firmly fixed in the body that immediate relief does not come. The dental surgeons are now sufficiently alive to the danger of poor dental work that it is altogether probable that infections from this source will be less frequent in the near future.

*Mr. Dachtler:* The problem of alveolar abscesses and infections needs further study and intelligent discussion. It is evident that focal infections of the teeth constitute a medical and not merely a dental problem. The physician should therefore be the court of last appeal.

While many so-called medical conditions are due to chronic infections it must not be supposed that abscessed teeth are the sole cause of such conditions and the physician who disregards other sources of infection is negligent in the performance of his duties. A negative report on X-ray findings is often misleading. Numerous films from different angles should be taken to satisfactorily investigate the roots which may be affected. The interpretation of a roentgenogram is not always a simple matter and a large experience is necessary to properly educate the X-ray diagnostician in this field.

It has been proved that bone operations require more careful aseptic technique than operations on many other portions of the body. The mouth harbors large numbers of pathogenic organisms. Proper sterilization is difficult, but is necessary to obtain satisfactory dental treatment. It is important from the medical standpoint to secure evidences as to infection in any part of the body. In the presence of serious lesions, such foci of infection, should be suitably treated. In the light of our present knowledge, when such lesions exist, caused by or aggravated by alveolar infection the dentist should not presume to advise the patient against the removal of abscessed teeth. Treatment of the root canal is of no avail.

Abscesses can be grouped under three heads; namely, active, low grade, and inactive abscesses. Active abscesses should always be eliminated. The general condition of the patient should determine whether or not a low grade infection should be radically treated. In the third class where no activity exists, extraction is not indicated, and local treatment is inadvisable.

The Academy met on February 6, to listen to an address by Dr. W. J. Cassidy of Detroit on "Cranial Injuries with and without Compression, Their Diagnosis and Treatment." Dr. Cassidy gave a clear presentation of the subject and the discourse was accompanied by lantern slides illustrating the various topics under consideration. The large experience of Dr. Cassidy on head injuries and his success in the radical treatment of such conditions added to the value of his remarks. A brief discussion followed in which was considered the occurrence of Jacksonian Epilepsy after decompression operations.

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\* MEETINGS OF COLUMBUS \*  
\* ACADEMY OF MEDICINE \*  
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(J. A. Beer, M. D., Secretary)

At the regular meeting of the Columbus Academy held on January 19, Dr. George C. Schaeffer gave a talk on "Facial Reconstruction," going over in detail the various steps in

the work and illustrating each with plates showing the remarkable results. Discussion was led by Drs. J. W. Means and J. F. Baldwin. Dr. E. H. Chapin read a paper on "Gonorrheal Inflammation in Women" which covered the subject thoroughly. A resolution presented by the Public Health Committee urging immediate action on construction of the isolation ward of the proposed general city hospital was referred back to committee with instructions to ascertain what steps the University contemplates in the matter.

On February 9 the Academy listened to a comprehensive symposium on "Influenza," participated in by Drs. J. H. Warren, R. G. Noble, L. L. Bigelow, C. D. Postle and J. H. J. Upham. Dr. Warren spoke of the bacteriology and pathology of the disease, based on autopsy findings and examination of discharges; Dr. Noble on medical aspects; Dr. Bigelow on surgical features; Dr. Postle on aural complications, and Dr. Upham on the need of further research work and treatment. Dr. William F. Bay presented a case report of a hip injury bringing up differential diagnosis between tubercular and pyogenic involvement.

The program of the meeting of March 2 consisted of an address by Dr. E. P. Joslin of Boston on "Diabetes." Dr. Joslin spoke of the increase from decade to decade in the cases of diabetes, showed statistically that under modern methods of treatment the lives of these patients have been prolonged three times, emphasized the absolute necessity of intelligent co-operation by the patient in carrying out the treatment, and made in conclusion a plea for community support for laboratory workers in this field, to whom he gave freely the credit for lowering the mortality rate during the past few years. Dr. Joslin's address was enjoyed by an audience of over 200, among whom were many guests from throughout the Tenth District of the Association. The paper was discussed by Drs. Wilson, Upham, Gordon and Baldwin, with concluding remarks by Dr. Joslin.

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\* COUNTY SOCIETY REPORTS \*  
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SECOND DISTRICT

*Darke County Medical Society*, in session at Greenville February 12, enjoyed instructive addresses by three medical guests. Dr. W. D. Gatch of Indianapolis spoke on "Carcinoma of the Stomach, A Curable Disease," pointing to the value of careful histories and accurate X-ray examinations as aids in diagnosis, and to the importance of early diagnosis and radical operation. Dr. E. R. Arn of Dayton illustrated his paper on "Blood Transfusion" with lantern slides. He predicted a wide field of usefulness



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for this procedure in chronic infections. Dr. H. W. Burnett, also of Dayton, gave a lantern slide demonstration in X-ray diagnosis. There were 14 members and three visitors present, which was a creditable showing in view of the prevalence of epidemic.—B. F. Metcalfe, Correspondent.

### THIRD DISTRICT

*Marion County* Medical Society held its regular monthly meeting in Marion on February 3. A new constitution was adopted and there was a general discussion of public health and medical bills pending before the state legislature. The scientific program consisted of papers on "Mechanism of Immunity," by Dr. F. C. Smith; "Appendicitis," by Dr. J. A. Dodd; "Common Difficult Fracture Locations," by Dr. J. W. McMurray; "Diagnosis and Management of Acute Social Diseases from the Standpoint of the General Practitioner," by Dr. W. J. Weiser; "Early Diagnosis of Tuberculosis," by Dr. R. S. Dombaugh, and "Goiter," by Dr. A. J. Willey.—News Clipping.

### FIFTH DISTRICT

*Ashtabula County* Medical Society met at the Ashtabula Y. M. C. A. on January 13 for its 135th session. The members gathered for a dinner and social hour, after which Dr. J. J. Kurlander of Cleveland presented an excellent paper on "Treatment of Knee Joint Tuberculosis." Discussion was led by Drs. S. H. Burroughs of Ashtabula, B. C. Eades of Conneaut and W. H. Leet of Conneaut. Dr. Carl Dewey of Conneaut was elected to membership and Dr. Weiss of Jefferson was appointed counsellor for three years.—B. C. Eades, Secretary.

*Lake County* Medical Society, in session at the Parmly Hotel, Painesville, January 19, installed officers for 1920. Drs. V. N. Marsh, Painesville; C. W. Emmons, Fairport; J. V. Winans, Madison; N. C. Ice, Willoughby, and H. N. Amidon, Painesville, were appointed as a committee to revise the county fee schedule. The meeting was informal and many subjects for the good of the society were discussed.—E. S. Jones, Secretary.

*Lorain County* Medical Society met in Elyria on January 13. Because of a heavy snow storm attendance was small but the fourteen members present enjoyed the dinner and smokes. The meeting was given up almost entirely to reports and discussions on the anti-tuberculosis campaign which the society intends to enter this year.—R. A. Pease, Secretary.

### SIXTH DISTRICT

*Stark County* Medical Society devoted its meeting of February 17 to a symposium on influenza. Dr. Earl Musselman of Alliance spoke on "Epidemiology of Influenza;" Dr. J. J. South of Massillon on "Symptomatology of Influenza;" Dr. Roscoe Deeds of Canton on "Prophylaxis and Treatment of Influenza," and Dr. J. F. DeWitt of

Canton on "Treatment of Pneumonia." Drs. Perry F. King and George S. Hackett are the newly elected president and secretary of the society, respectively.

### EIGHTH DISTRICT

*Athens County* Medical Society held an open meeting at Athens on February 3. The speaker of the evening was Dr. George C. Schaeffer of Columbus, whose subject was "Plastic Surgery."—News Clipping.

*Licking County* Medical Society, in session at the Warden Hotel, Newark, January 29, listened to an address by Dr. Victor Turner on "Examination of the Heart."—News Clipping.

*Muskingum County* Medical Society's meeting of January 14 was attended by 30 members. A revised fee schedule, somewhat like that of neighboring counties, was unanimously adopted. Dr. H. T. Sutton presented the needs of the committee for propaganda on cancer control, after which the society recorded itself as being wholeheartedly behind this movement. Dr. Simon Kelly read an excellent paper on "Broncho Pneumonia." The president announced the appointment of the following committees: Program—Drs. Higgins, Klemm, Kelly. Public Hygiene—Drs. Bateman, Dusthimer, Sellers. Medical Legislation—Drs. Sutton, Sr., Melick, Crossland. Public Health Education—Drs. Bainter, Long and Infield. Dr. Simon Kelly read an excellent paper on "Broncho Pneumonia." Drs. C. J. Roach, T. L. Sutton and L. B. Simpson were elected to membership.

At the meeting of February 11, Dr. J. M. Fasig discussed "The Relation of Focal Infections to Systemic Disease" from a radiographic viewpoint, and Dr. L. F. Long spoke on "Diseases of the Antrum of Highmore."—M. A. Loebell, Secretary.

### TENTH DISTRICT

*Knox County* Medical Society held a banquet in Mt. Vernon on January 13, honoring members who served during the war. The affair was a wonderful success, more than one hundred being present. The address of welcome was given by Dr. N. R. Eastman, retiring president, and was responded to by Dr. H. W. Blair, the incoming president. Among the good talks was one by Dr. George C. Schaeffer of Columbus. Drs. C. D. Conard, J. R. Claypool, S. A. Douglass, E. D. Dowds, C. H. Haralson, J. H. Norrick, J. M. Pumphrey and I. S. Workman gave interesting accounts of their war experience.

*Ross County* Medical Society's meeting of February 3 was addressed by Dr. Martin H. Fischer of Cincinnati on "Coma, Its Causes and Effects." The attendance numbered 35, including in addition to Dr. Fischer, the following guests: Colonel Hefelbower of Camp Sherman Hospital; Drs. L. E. Wills, F. C. Metzger, Waverly; Dr. J. W. Wills, Wellston, and Drs. G. H. Colvill and D. V. Courtright, Circleville.



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# MEDICAL COMMENT    ❧    ❧    ABSTRACTS AND CURRENT TOPICS OF INTEREST

**T**HE PUBLICATION COMMITTEE IS MORE THAN ANXIOUS TO MEET THE NEEDS OF THE JOURNAL'S READERS. IN CONSEQUENCE THE MEDICAL EDITOR IS INITIATING A NEW DEPARTMENT TO BE DEVOTED TO MEDICAL COMMENT, ABSTRACTS, AND CURRENT TOPICS OF INTEREST TO THE GENERAL PRACTITIONER. THE EDITORIAL POLICY OF THIS NEW DEPARTMENT WILL BE ONE OF SERVICE AND SUGGESTIONS AND CONTRIBUTIONS WILL BE GRATEFULLY RECEIVED.—MCM.

## One Kind of Family Doctor.

**M**UST oblivion engulf the "old family doctor?" In this day of specialists, is there a place for him? Capt. Malford W. Thewlis, U. S. A., writing in *The Medical Review of Reviews*, June, 1919), tells of one type of family physician that will never go—the kind that knows his business and his limitations, that is up-to-date in knowledge or in methods, and knows where to go to get things done that he can not do himself. A large part of the world's medical work, Captain Thewlis reminds us, must be done by just such men. They care for us before the specialist gets us and after he gets through with us. Some of the specialists' reputation for *quick and easy recoveries* is really due to him; very often he makes it unnecessary for us to go to the specialist at all. He is good at diagnosis, and his lifelong familiarity with us, our families, and our children gives him aid of a kind and degree that no specialist can count upon. We read:

"Much is being said concerning the exit of the old family physician and the advance of the specialist. It is often remarked that the day of the family doctor has disappeared and he is often looked upon with ridicule. He is said to be inefficient, unable to diagnose rare conditions, unable to institute proper treatment.

Some noted physicians have said that the family doctor has no place in the practise of medicine. They are greatly mistaken, however, for the family doctor has not gone and will never go. There will be a reaction, and his place will some time be much stronger than it is today. There are too many specialists today, and fully as many mistakes are made by them as by the family physician.

**T**HE specialist oftentimes does not realize and consider the human side of the practise of medicine. The so-called Social Service is an excellent imitation of the family doctor who knows every detail concerning the life of his patients. Social Service collects facts, but only a person who has followed his people from childhood to manhood can know the heart of his patients. To know how these people live can in part be ascertained by nurses who call upon these patients. Little do they learn about the minds of these patients.

Surgeons operate upon patients, and when they are discharged from the hospital they mark it on

their records as *uneventful recovery*. To be sure, the patients go home much improved, and as the surgeon never sees the patients again he assumes that they are in excellent condition. In many cases the patient soon develops a post-operative nervous condition, and it is only after a year or longer that the patient regains good health. The family doctor is the one who has the burden to bear in these cases, for it is not an easy matter to treat them. In the meantime the surgeon believes the operation was a great success.

**T**HERE are family doctors who are inefficient and who should not be allowed to practise medicine. Their work is crude and a disgrace to the science. I do not enlarge upon this type, but have one in mind that I will relate as an example of a family doctor who is efficient and who I believe is doing as good work in medicine as the average specialist. He is a well-educated physician, living in a town of 3000 and has prepared himself well in knowledge and equipment. He subscribes for many medical journals, and reads French medical journals and reviews the foreign medical press; he also has many translations of foreign works in his library, which is always kept up-to-date with modern books.

This physician has a very complete equipment: a gas-oxygen apparatus for minor operations as well as obstetrics, a compressed-air apparatus for nose and throat work, a portable X-ray outfit for the bedside, an X-ray transformer with Coolidge outfit for gastro-intestinal radiographs, as well as treatment. He has radium which he uses for treatment work. There is a small transformer on his desk which gives an electric light for the specula which are used in the nose, ear, vagina, rectum, and urethra. In this way he is able to satisfy himself about many diagnoses without the aid of the specialist.

His laboratory is very complete, and he has a capable young man who does the analysis as well as the developing of X-ray plates. In the laboratory is an incubator which is used for cultures, an autoclave for sterilizing, an electric centrifuge for urinalysis and with a Babcock attachment for examination of cow's and mother's milk. A microscope of the latest type assists in the diagnosis of many conditions. The Widal reactions are done here. urinalysis, all blood-counts, and tubercle bacilli stains. The assistant has been trained to do this work, so that it does not require very



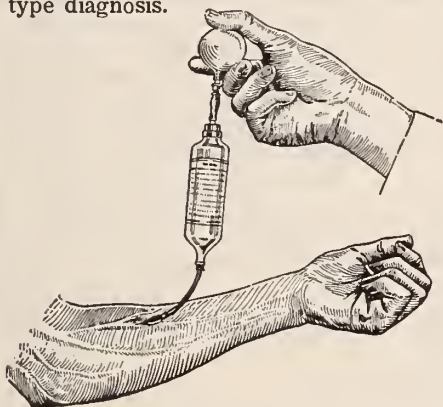
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much time of the physician. This doctor has spent time in postgraduate work and is well equipped to do X-ray work. He also does a great deal of refraction work, and obtains excellent results from his prescriptions. His equipment is perhaps the most complete in New England, and he finds that his practice is increasing each day. He finds that he is consulted from far and near, and that patients come from large cities like Philadelphia and New York. His treatments by means of high frequency and diathermia have been successful, and many treatments are given with the aid of a trained nurse. He does a great deal of obstetrical work and is very successful. The use of gas-oxygen anesthesia has added to his practice. He has a book which he has written for mothers, and it is a great comfort to them. The nurse who assists him in this work is a valuable asset to him.

He does no surgery, except some minor work, and does not believe in the occasional surgeon, the one who operates once a week. His surgical work is done by a competent surgeon. He sends many patients to the various specialists. His knowledge and equipment have enabled him to make a diagnosis, and he knows why a patient should go to a specialist. He sends many patients to specialists because he knows his own limitations.

He gives every care and consideration to his patients, and the poor receive the same attention as the well-to-do. Often he gives money to poor patients, and I have known him to give clothing to poor children. He is loved by his patients and is looked upon with the highest regard in the community. He is more than a physician, he is a true friend to many patients and many find him their best friend, the only one they have in some cases, and one who is always at their command, day or night.

**T**HE practise of medicine is a fascination to him, and the study gives him as much enjoyment as literature, painting, and music gives to others. Commercialism is not his aim. He is in love with the science of medicine. He realizes that science is defeated by commercialism. His

many years of practice have given him a power of observation at the bedside that is more valuable to him than the modern methods of precision, although he is fully equipped with them. He has faith in therapeutics, and uses many of the old remedies used by our older physicians.

This combination with the latest methods which he obtains from the post graduate work, together with the teachings of his old preceptor, gives him an armamentarium which is difficult to equal.

This type of family physician will never go, and in time there will be a reaction which will make the services of the family doctor more in demand. The careless, crude, poorly equipped family physician should be denounced, but the type which I have described should be encouraged. With the experience and equipment which this physician possesses he does not fear the specialist and does not suffer the humiliation from these specialists because he is as well-equipped as they are. He does not consider himself, however, as a mere clearing-station to direct a patient in this or that direction as the disease may be. He does not shift the responsibility of his cases to others, and is willing to follow his cases along to see the results of treatment. His fees are not too high, therefore he sees his patients frequently, and in this way has a much better way of studying the outcome of his treatments.

To repeat, there are too many specialists today, and the general practitioner will be more and more in demand as time goes on. Specialists tend toward commercialism, which defeats science. Also to rob medicine of the human element is to take from it its most fascinating side."

#### Abbott Anniversary

The thirtieth anniversary of the founding of the Abbott Laboratories, is being celebrated this month. It is interesting to note on this occasion that more new medicinal chemicals, and council-passed products have come from the Abbott firm during the past five years than from any other firm in this country.

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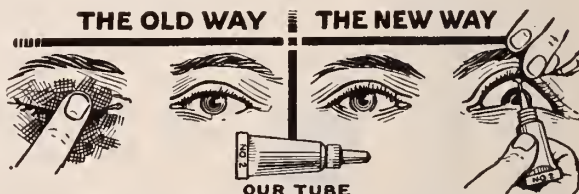
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*Migraine, Hemicrania,  
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Strain---to the patient  
they're all "Headache."*

And he, or she, "want you to do something for the Headache."  
Of course, you will look for, and if possible remove, the underlying  
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But that takes time and Mr., Mrs., or Miss Headache-Sufferer simply  
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ATOPHAN does not relieve all types of Headaches, especially not those  
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**Physician Wanted**—Residents of the community adjoining Milnersville, a village near Kimbolton, Guernsey County, are badly in need of a resident physician. There is none nearer than ten and twelve miles from that center. Complete information will be furnished by Mr. M. G. Fisher, Kimbolton, Ohio, on request.

**Opening for Physician**—There is a splendid opening for a doctor in the village of New Pittsburg, which lies midway between Wooster and Ashland, a distance of 22 miles. New Pittsburg has a population of about 100 and the following nearby villages (on or near the Lincoln Highway) are all without medical service: Reedsburg, 2½ miles; Rowsburg, 3 miles; Redhaw, 5 miles; Lattisburg, 4 miles; Jefferson, 4 miles. Address Rev. R. E. Rangler, R. D. 8, Wooster, Ohio.

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Mrs. Emma King, 147 W. Chestnut Street, Orrville, Ohio.

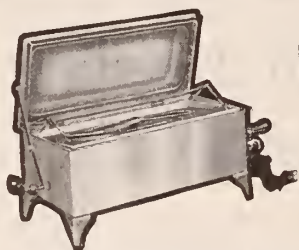
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**Physician Wanted**—Big Prairie, Ohio, and vicinity offers splendid location for a physician. Located on the main line of the Pennsylvania railroad, 14 miles west of Wooster. Big Prairie and the village of Lakeville, two miles west, including the surrounding country incorporates approximately 300 families without a physician. This territory is located in one of the best farming communities in Ohio. Address R. R. Sterling, Big Prairie, O.

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## DEATHS IN OHIO

*George Henry Albers, M. D.*, Miami Medical College, Cincinnati, 1887; aged 57; member of the Ohio State Medical Association; died at his home in Cincinnati, January 19. Dr. Albers suffered a paralytic stroke two years ago and has since been in failing health. His widow, three daughters and a son survive.

*Micheal Behrman, M. D.*, Medical College of Ohio, 1901; aged 38; Fellow of the American Medical Association; died in a Cincinnati hotel, January 12, from a self-inflicted bullet wound. Despondency over ill health is believed to have precipitated the act. Dr. Behrman's home was at Visalia, Kentucky, but he practiced medicine in Covington for a number of years. He was a brother of Dr. Oscar Behrman of Cincinnati.

*Harry Stoddard Clever, M. D.*, University of Pittsburgh School of Medicine, 1897; aged 46; former member of the Ohio State Medical Association; died at Grant Hospital, Columbus, January 20, after an illness of several months. Dr. Clever's home was in Tuscarawas, where he had practiced for 17 years and was, at the time of his death, a member of the city board of education. In addition to his practice in Tuscarawas, Dr. Clever had during the past year maintained

offices in Uhrichsville. He leaves a widow and two children.

*James T. Croney, M. D.*, Licensed to practice in Ohio, 1896; aged 75; died at his home in Lima, January 21, from complications. Dr. Croney was a practicing physician in Columbus for a number of years but he had made his home in Lima since his retirement two years ago. Besides his wife he is survived by two daughters.

*Marvin W. Duckwall, M. D.*, Miami Medical College, Cincinnati, 1902; aged 40; member of the Ohio State Medical Association; Fellow of the American Medical Association; died at his home in Dayton, February 1, from tuberculosis with which he had been suffering for two years. Dr. Duckwall practiced in Dayton for 17 years and was a member of the staff of St. Elizabeth Hospital. He was a son of Dr. F. A. Duckwall of Dayton.

*Granville L. Gorslens, M. D.*, Starling Medical College, 1865; aged 82; died at his home near Chillicothe, January 9.

*Claude D. Hamilton, M. D.*, College of Physicians and Surgeons, 1913; aged 31; former member of the Ohio State Medical Association; died in Phoenix, Arizona, January 30, from tuberculosis. Dr. Hamilton's home was in Canton and when war was declared he was one of the first physicians in that city to enter service, receiving a captain's commission. After special work at the Rockefeller Institute he was placed in charge

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## Full Creosote Action

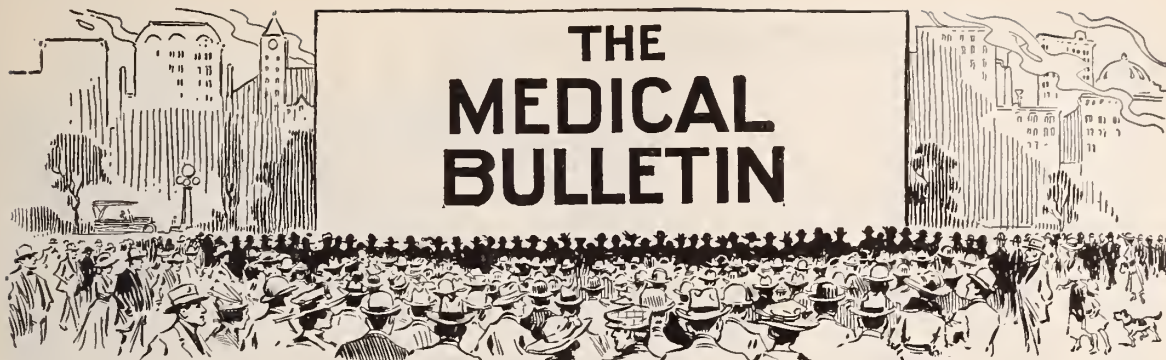
For a time physicians lost faith in creosote because while it was possessed of valuable therapeutic properties, it could not be taken in doses large enough to be effective nor for a sufficiently long time to produce a permanent effect. Patients soon complained of gastric distress and discomfort, of nausea even, and refused to take any more creosote.

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## Being Brief Notes Regarding Council-Passed Products

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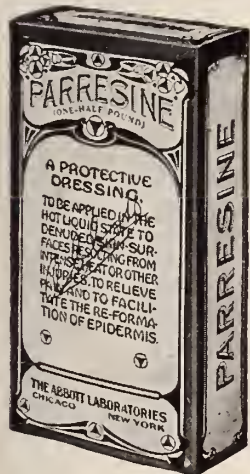


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### A non-secret wax dressing for burns.



#### Parresine (Abbott)

sprayed or painted hot over a burned surface relieves the pain immediately and facilitates the growth of underlying epithelia. Every doctor should have a supply of Parresine on hand for emergencies.

Also the Abbott Parresine Atomizer and Parresined Lace Mesh Dressing.

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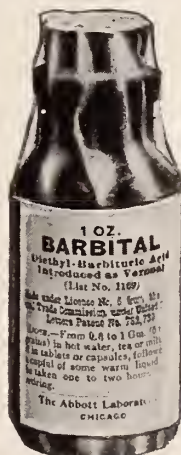
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of the respiratory wards at Camp Wadsworth, where it is believed he contracted the disease which caused his death. He leaves his mother, one brother and an uncle, Dr. G. C. Hamilton of Louisville, with whom he was associated in practice at one time.

*Thomas J. Harcourt, M. D.*, American Eclectic Medical College, Cincinnati, 1889; aged 82; died at his home in Sommerville, January 15. Dr. Harcourt was a veteran of the Civil War and prior to his retirement fifteen years ago, spent nearly 50 years in practice in Tusculum, Cincinnati. His widow, three sons and two daughters survive.

*Boyer Smith Kofford, M. D.*, University of Buffalo, Department of Medicine, 1917; aged 25; member of the Ohio State Medical Association; died at his home in Youngstown, January 27, after five days' illness of pneumonia. Dr. Kofford had lived in Youngstown since July, 1917, when he entered Youngstown Hospital as an interne. He served for eight months in the medical branch of the Army, five months of the time overseas, and since his discharge had been a member of the staff of Youngstown Hospital. He leaves a widow, parents and one sister.

*Robert G. Langsdale, M. D.*, Medical College of Ohio, 1881; aged 68; died in Middletown Hospital, January 25. Dr. Langsdale had practiced in Hamilton, Van Wert, Franklin and Middletown.

*Charles Milton Lenhart, M. D.*, Miami Medical College, Cincinnati, 1886; aged 56; former member of the Ohio State Medical Association; died at his home in Zanesville, January 17. Dr. Lenhart was a member of the surgical staffs at the City and Good Samaritan Hospitals, Zanesville.

*Morris H. Miesse, M. D.*, Columbia University College of Physicians and Surgeons, New York, 1868; aged 76; died at his home in Circleville, January 21, from apoplexy. Soon after his graduation Dr. Miesse located in Royalton, Fairfield County, where he remained until 1880, when he removed to Circleville. He was a veteran of the Civil War. His widow and three daughters survive.

*Sylvester Bronson Moon, M. D.*, Miami Medical College, Cincinnati, 1872; aged 84; died at his home in Wilmington, December 21, from senile debility.

*John M. Wiltshire, M. D.*, Starling Medical College, Columbus, 1865; aged 84; former member of the Ohio State Medical Association; died at his home in Richmond Dale, Ross County, January 17, from senility and heart disease. Dr. Wiltshire's medical education was interrupted by his service in the Civil War, in which he engaged as a member of Company E, 63rd Ohio Volunteer Infantry. Upon his discharge he completed his course and later practiced in Chillicothe, Morresville and Londonderry, moving to Richmond Dale in 1910, where he practiced until a few months before his death. Three sons and one daughter survive.

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 \* **STATE MEDICAL BOARD** \*  
 \*\*\*\*\*

Indicating a desperate though futile attempt at law evasion the Ohio Chiropractic Association has filed an application for a restraining order and injunction, alleging that the State Medical Board has "maliciously, arbitrarily and illegally refused to recognize any school of chiropractic, and therefore graduates of this cult are not able to obtain certificate to practice in Ohio." The case was heard in the Common Pleas Court of Cuyahoga County on February 4 and 5, Attorneys Ray Martin and A. O. Dickey of the Attorney General's Office representing the State Medical Board, and Smith Bennett and W. H. Boyd the Chiropractic Association.

Approximately 35 cases have been filed against unlicensed chiropractors throughout the state and as many more prepared for filing. Should the decision in the above case be favorable, as the board anticipates, an intensive campaign to rid the state of violators of the medical practice act will be launched.

#### PROSECUTIONS

Among offenders prosecuted by the board recently was Theodore T. Jacobsen, he of "United Doctors" fame, whose certificate to practice medi-

cine was received in 1916. Jacobsen was twice tried on charges of practicing without a license during January, being convicted and fined \$500.00 and costs on such a charge in Cleveland Municipal Court on January 13, and \$300.00 and costs in Miami County Probate Court on January 27. In the latter instance notice of appeal was given, to test the constitutionality of the law under which the arrest was made, and pending decision in this matter seven other counts of a similar nature against Jacobsen in Miami County will not be tried.

M. Pottgeiser, unlicensed chiropractor of Cleveland, plead guilty to practicing medicine without a license and was fined \$100.00 and costs in the Municipal Court of Cleveland on January 13. He promised to discontinue practice.

Action was filed, January 22, against Ben Slocum of Columbus, charged on two counts with practicing medicine without a license. Case set for trial February 26.

Mike Klotz of Akron, who was convicted of illegal practice of medicine several months ago and fined \$25.00 and costs, was found guilty of a second offense on January 26. Result: \$200.00 and costs for Mike.

H. H. Olson, F. D. Wittenberg, Harry B. Murray, W. C. Knott and G. C. Woolverton, unlicensed Cleveland chiropractors, have discontinued practice or removed to more fertile fields in other states, thus avoiding the inevitable.

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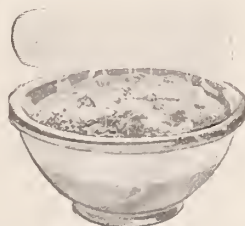
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## Simple Rules in Making Income Tax Returns Should Aid Physicians During Short Period of Grace Still Remaining

Have you filed your income tax report for 1919?

If you have not your period of grace is growing short for the present income tax law requires that returns for 1919 be filed on or before March 15, 1920, at the office of the Collector of Internal Revenue for the district in which the taxpayer lives.

Payment of the tax may be made in full at the time of filing return or in four installments—on or before March 15, on or before June 15, on or before September 15, and on or before December 15. At least one-quarter of the tax due *must* accompany the return.

Figuring income tax should be a simple matter for the physician, who is accustomed by education and training to the keeping of careful records of transactions involving income and expenditures. Just what he is permitted to deduct as professional expense, in figuring his net income, is usually the most dubious question and as the ruling which applies to exemptions changes more or less each year, a list of these items has been included in the following summary of information.

### RETURNS FOR 1919

An unmarried person must file a return if his or her net income was \$1000 or over; and a married person living with wife (or husband) must file if their joint income was \$2000 or over. A widow or widower, or a married person living apart from wife (or husband) is classed as a single person.

The requirement to file a Federal Income Tax return is not contingent upon there being a tax due.

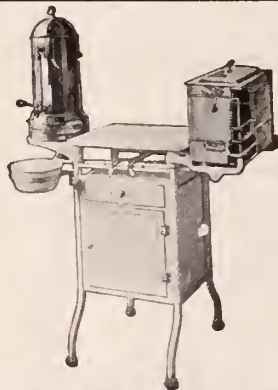
Form 1040A is used for net income of not more than \$5000. Form 1040 for net income over \$5000. Instructions and a working sheet accompany each return form.

Every firm of professional men operating as a corporation must make an annual return of net income on Form 1120; if operating as a partnership, a return on Form 1065 must be filed.

### GROSS INCOME

The physician's gross income from his profession includes all compensation for his services.

Where services are paid for with something



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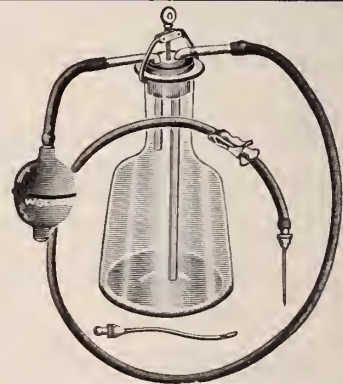
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When used **early** in the disease **Diphtheria Antitoxin** has reduced the mortality to about 2%. In the days before **Diphtheria Antitoxin**, the mortality was 35%.

### DIPHTHERIA TOXIN-ANTITOXIN MIXTURE

Package of 3 vials (one immunization).....	\$1.00
Package of 30 vials (ten immunizations).....	7.50
Package of 1 vial (ten immunizations, 30 cc. vial).....	6.00

### SCHICK TEST

Package of 10 tests; Lederle outfit.....	1.00
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1,000 Units (prophylactic dose) in syringe.....	1.00
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10,000 Units (therapeutic dose) in syringe.....	5.00
20,000 Units (therapeutic dose) in syringe.....	9.00

*Requests for further information are invited.*

---

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other than money, the fair market value of the thing taken in payment is the amount to be included as income. If the services were rendered at a stipulated price, in the absence of evidence to the contrary such price will be presumed to be the fair value of the compensation received.

In the case of a salary received, this should be shown separately, in Block B, of the return. Many physicians are officers or employes of a state, or a political subdivision of a state, such as city, town or county. Their salaries or wages as such officers or employees is exempt from the Federal Income Tax.

As to fees for services to patients, etc., these should be included in the gross income for the taxable year in which received, unless they are included when they accrue to him in accordance with an approved method of accounting followed by him.

#### CASH BASIS

A professional man may make his return on the basis of cash intake and actual expenditures for the year. It should be noted here that a taxpayer is deemed to have received income which has been credited to or set apart for him without restriction.

#### ACCRUAL BASIS

A more exact and equitable method of figuring net income is on the "accrual basis". This means a computation on the basis of income earned and expenses incurred, whether paid or not, that actually pertain to the taxable year, excluding income earned and expenses incurred in previous or succeeding years. A professional man who keeps books of account should make returns by this method, if his accounting method is one generally employed, and shows a correct net income.

#### DEDUCTIONS

A physician may claim as deductions the cost of supplies used by him in the practice of his profession, expenses paid in the operation and repair of an automobile (including license fee) used in making professional calls, dues to medical societies, stationery and subscriptions to professional journals, the rent paid for office rooms, the expense of the fuel, light, water, laundry, telephone, telegraph, etc., used in such offices, and the hire of office assistants. All taxes except income tax and street assessments; donations to charities up to 15 per cent. of net income, including such contributions; insurance premiums on office and other professional equipment; physicians' liability insurance and automobile liability insurance, if the entire upkeep of the automobile is legitimately deducted as professional expense.

Amounts expended for books, furniture and professional instruments and equipment of a permanent character, are not allowable as deductions. In the deductions from gross income, the law specifically bars personal living or family expenses.

In the case of a physician who has a regular place of business and who rents a residence, but

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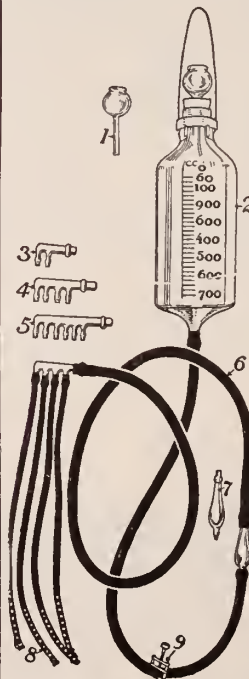
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This serologic test is the very best means of determining the presence or absence (cure) of systematic Gonorrhoeal infection.

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Test . . . . . \$5.00

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6. Defense through the court of last resort and until all legal remedies are exhausted.
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incidentally receives there patients in connection with his professional work, no part of the rent at his home is deductible. If, however, he uses part of the house for his office, such portion of the rent as is properly attributable to such office is deductible.

#### BAD DEBTS

The uncollectible bills of physicians have a very important bearing on the net earnings for each year. The principal point in connection with such accounts made in income tax procedure is that there can be no allowance for such bad debts in returns figured on the "cash basis." That is, a person who has been making his annual returns on the basis of cash received and actual cash expenditures each year has never shown as income his accounts with patients, and is, therefore, not entitled to take them out of income.

On the other hand, one who annually figured his gross income on the "accrual basis," that is, included his cash receipts and charges against patients and clients for all of his services performed during each year, is entitled to a deduction for "bad debts" covering such accounts as he ascertained during the year were uncollectible and charged off on his books.

An account merely written down or a debt known to be worthless prior to the beginning of the taxable year is not a proper item for deduction.

#### DEPRECIATION

A reasonable allowance for the depreciation of instruments and equipment, including technical books, automobile, buildings, office furniture and fixtures, is allowed. The proper allowance is that amount which should be set aside for the taxable year in accordance with a consistent plan by which the total of such amounts for the useful life of the property will suffice, with the salvage or scrap value, at the end of such useful life, to provide in place of the property its cost or its value as of March 1, 1913, if acquired by the tax payer before that date. Twenty-five per cent. is considered by the Internal Revenue Department as a reasonable depreciation for automobiles; 10 per cent. for office furniture and fixtures and books.

#### OBSOLESCENCE

When through some new invention, or radical change in methods, or similar circumstance the usefulness in his profession of some or all of his instruments or other equipment is suddenly terminated, so that he discards such assets permanently from use, the physician may claim as a loss in that year the difference between the cost (reduced by reasonable adjustment for wear and tear, which it has undergone), and its junk or salvage value. If the apparatus was owned prior to March 1, 1913, its fair market value on that date should be considered, instead of its cost, in figuring obsolescence. This deduction is allowed by law, but the taxpayer must be able to substantiate any claim made on this basis.

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Blood Chemical Analyses for diagnosis of Nephritis, Diabetes, Gout, etc.

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Borden's Malted Milk contains the invaluable proteins of pure milk and malted cereals, thereby supplying the convalescent's need for a strength-sustaining, tissue-building food in the most easily digested form.

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## Ohio Communities Took Special Steps to Meet Recurrence of Influenza

Influenza again attained epidemic proportions in nearly every section of Ohio during late January and February. The disease, however, is reported to be much milder in form and with fewer cases of pneumonia developing than during the period when influenza was epidemic last year. Because of its decreased virulence it is thought the disease will spend itself in a comparatively short time and that fatalities will be far below the percentage of the previous epidemic.

During the present widespread prevalence most communities have had the advantage of more adequate medical and nursing aid than was available last year, due to the fact that many physicians and nurses have been released from military service and are free to assist in civilian work, but where such service was inadequate the formation of voluntary organizations is said to have been helpful.

Emergency hospitals were established in a number of cities, additional wards for influenza patients were opened in others. Practically all hospitals were closed to visitors.

In response to a request by Health Commissioner Rockwood of Cleveland for funds with which to fight the epidemic in that city, the local Red Cross chapter furnished \$50,000 for the employment of emergency field nurses, ambulance hire and the care of charity patients.

In addition to influenza Toledo in late January was in the grip of an epidemic of measles, more than 1,200 cases being reported, mostly among school children.

Among relief measures taken in Cincinnati, hospital executives agreed that all influenza patients requiring hospital care should be segregated at the General Hospital and non-influenza patients shifted to other hospitals.

Health Commissioner Peters of Dayton reported that the number of cases there approximated the figure reached in last year's epidemic, with a much lower average of severity. A number of cases of the intestinal type were found, but few of the pneumonic were reported.

In Akron an already serious situation consisting of a high prevalence of chickenpox, measles, mumps and scarlet fever, in addition to influenza, was augmented by crowded housing conditions and lack of hospital facilities. An emergency committee of citizens cooperated with the health department in devising community means of combatting the spread of disease. Special appeal was made to ex-service men with experience in hospitals to assist in caring for the sick.

Complying with a request of the city health department, Canton city council passed an ordinance providing \$12,000 for use in checking communicable diseases. The fund is known as the influenza epidemic fund and is to be used only in such emergencies.

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Under the suggested plan the Red Cross enlists all persons in the district capable of giving nursing service; the Public Health League is divided into committees to care for the distribution of medicines, foods and other supplies. Volunteers for the transportation of the sick to hospitals form another committee.

The state department has also been of assistance in advising communities in the establishment of emergency hospitals. Regarding the choice of buildings for this purpose, it is recommended that they should be well lighted, properly ventilated, supplied with good plumbing and drainage, easily accessible and well heated. There should be facilities for cooking and hot water in considerable quantities.

Oh!

The reason why our Senators could not stand for anything as intoxicating as 2¾ per cent. beer is because you can go into a drug store and buy a patent medicine containing 59 per cent. alcohol with a little ether added to give it a kick.—Luke McLuke.

*Organization of Public Health Nursing*, by Annie M. Brainard. Price \$1.35. The MacMillan Company, New York.

### Hospital Unit in Akron

A new hospital unit has been opened by the United States Public Health Service in Akron, with Dr. Walter M. Leonard, A. A. Surgeon, U. S. P. H. S., as director. A staff of consultants composed of Akron specialists, all former medical officers, is assisting in the work of the unit.

This service is primarily for the examination and treatment of claimants for compensation from the Bureau of War Risk Insurance. Having estimated that there are about fifteen thousand ex-service men in Akron and Summit County the new unit anticipates a busy time.

### Dot, Dot, Dash.

Dr. Walter S. Stuckey of Wapakoneta, president of the Auglaize County Medical Society, established a precedent on February 3 when he ordered medical supplies from a firm in Philadelphia by wireless. The message was sent from a local station by an amateur operator and was relayed by other amateurs to its destination.

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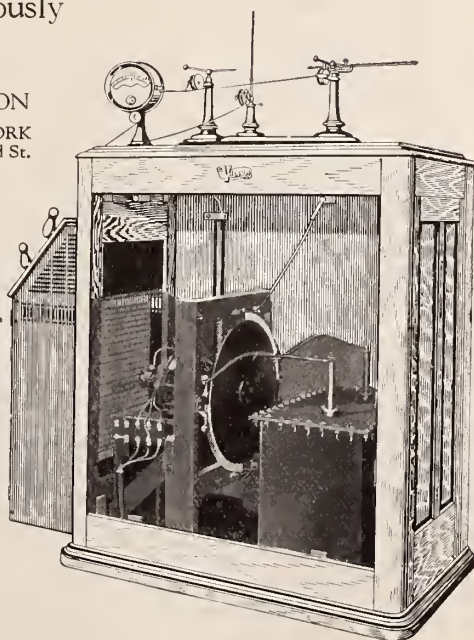
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<b>First District.</b> F. M. Fitton, Hamilton.....Eric Twachtman, Cincinnati...Cincinnati, 1919		
Adams.....	Titus Stephenson, Winchester...	O. T. Sproull, West Union.....3d Wednesday in April, June, Aug., Oct.
Brown.....	R. B. Hannah, Georgetown...	Geo. P. Tyler, Jr., Ripley.....4th Wednesday in Feb., May, and Nov.
Butler.....	James G. Graft, Trenton....	F. M. Fitton, Hamilton.....2d Wednesday, monthly
Clermont.....	A. B. Rapp, Owensville.....	F. H. Lever, Loveland.....3d Wednesday, monthly
Clinton.....	Robert Conard, Blanchester....	Henry Brown, New Vienna.....2d Thursday, monthly
Fayette.....	H. L. Stitt, Wash'g'tn, C. H.....	Lucy Pine, Washington C. H...1st Thurs., March, June, Sept., Dec.
Hamilton.....	H. Kennon Dunham, Cincinnati...	O. J. Seibert, Cincinnati.....Monday evening of each week
Highland.....	Lockhart Nelson, Hillsboro...	H. H. Lowe, Leesburg.....1st Wednesday in Jan., April, July and Oct.
Warren.....	S. S. Stahl, Franklin.....	Herschel Fisher, Lebanon....1st Tuesday in May, June, July, Sept., Oct. and Nov.
<b>Second District</b> H. B. Martin, Springfield .....E. R. Arn, Dayton.....Dayton, 1920		
Champaign....	D. C. Houser, Urbana.....	E. R. Earle, Urbana.....2d Thursday, monthly
Clark.....	R. C. Hebble, Springfield.....	A. W. Boehme, Springfield.....2d and 4th Monday each month
Darke.....	G. H. Harley, Hollansburg.....	A. F. Sarver, Greenville.....2d Thursday each month
Greene.....	M. I. Marsh, Cedarville.....	Reyburn McClellan, Xenia.....1st Thursday each month except October.
Miami.....	R. D. Spencer, Piqua.....	J. F. Beachler, Piqua.....1st Thursday each month
Montgomery...	E. H. Mallow, Dayton.....	G. G. Giffin, Dayton.....1st and 3d Friday each month
Preble.....	W. H. Tucker, Eldorado.....	S. P. Carter, W. Manchester...3d Thursday, monthly
Shelby.....	Lester C. Pepper, Sidney.....	O. O. LeMaster, Sidney.....1st Thursday, monthly
<b>Third District.</b> B. L. Good, Van Wert.....Austin S. McKittrick, Kenton..		
Allen.....	C. D. Gamble, Lima.....	E. C. Yingling, Lima.....1st and 3d Tuesdays
Auglaize.....	W. S. Stuckey, Wapakoneta...	C. L. Mueller, Wapakoneta...3d Thursday, monthly
Hancock.....	J. A. Kimmell, Findlay.....	Nella B. Kennedy, Findlay...1st Wednesday, monthly
Hardin.....	D. H. Bowman, Kenton.....	W. A. Belt, Kenton.....1st Thursday, monthly
Logan.....	J. W. Croft, West Liberty.....	Carrie Richeson, Bellefontaine.1st Friday, monthly
Marion.....	C. W. Sawyer, Marion.....	Maude L. Bull, Marion.....1st Tuesday, monthly
Mercer.....	J. P. Simons, Rockford.....	D. H. Richardson, Celina....2d Tuesday, monthly
Seneca.....	C. F. Daniel, Tiffin.....	E. H. Porter, Tiffin.....3d Thursday, monthly
Van Wert.....	C. G. Church, Van Wert.....	N. E. Leake, Van Wert.....2d and 4th Monday, monthly
Wyandot.....	Frederick Kenan, U. Sandusky.	B. A. Moloney, U. Sandusky...1st Thursday, monthly
<b>Fourth District</b> (With Third District in Northwestern Ohio District)		
Defiance.....	J. J. Reynolds, Defiance.....	D. J. Slosser, Defiance.....2d Wednesday, bi-monthly
Fulton.....	C. F. Hartman, Wauseon.....	P. S. Bishop, Delta...Semi-monthly
Henry.....	J. A. Fiser, Malinta.....	Charles M. Harrison, Napoleon.3d Wednesday, monthly
Lucas.....	E. W. Doherty, Toledo.....	J. F. Wright, Toledo.....Friday, each week
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore.....2d Thursday, monthly
Paulding.....	L. R. Fast, Paulding.....	J. U. Fauster, Paulding.....3d Wednesday, monthly
Putnam.....	P. D. Bixell, Pandora.....	H. A. Neiswander, Pandora...1st Thursday, monthly
Sandusky.....	C. R. Pontius, Fremont.....	C. I. Kuntz, Fremont.....last Thursday, monthly
Williams.....	C. M. Barstow, Bryan.....	J. A. Weltz, Montpelier.....2d Thursday each month
Wood.....	H. E. Ward, Pemberville.....	H. W. Dierksheide, Pemberville...2d Thursday, monthly
<b>Fifth District.</b> (No District Society)		
Ashtabula.....	W. H. Leet, Conneaut.....	B. C. Eades, Conneaut.....2nd Tuesday, monthly
Cuyahoga.....	R. H. Birge, Cleveland.....	Lester Taylor, Cleveland.....Every Friday evening
Erie.....	F. F. Lehman, Sandusky.....	F. J. Leblieq, Sandusky.....Last Thursday, monthly
Geauga.....	J. A. Heeley, Parkman.....	Isa Teed-Cramton, Burton...3d Thursday, Jan., March, July and Sept.
Huron.....	R. L. Morse, Norwalk.....	W. W. Lawrence, Norwalk....2d Thursday, monthly
Lake.....	W. P. Ellis, Painesville.....	E. S. Jones, Painesville.....1st Monday monthly



**Lorain**.....W. A. Pitzele, Lorain.....R. A. Pease, No. Ridgeville.....2d Tuesday, monthly  
**Medina**.....J. E. Walte, Lodi.....C. D. Freeman, Medina.....3d Wednesday  
**Trumbull**.....Walter W. McKay, Warren.....John D. Knox, Niles.....3d Thursday monthly except  
 June, July and August

**Sixth District**..John G. Wishard, Wooster...J. H. Seller, Akron.....

**Ashland**.....C. C. Patton, Ashland.....W. M. McClellan, Ashland....1st Tuesday, Jan., March, May  
 July, Sept., Nov.

**Holmes**.....J. C. Elder, Nashville.....A. T. Cole, Millersburg.....1st Tuesday, monthly

**Mahoning**.....R. B. Dobbins, Youngstown.....H. E. Patrick, Youngstown.....3d Tuesday, monthly

**Portage**.....Emly J. Widdecombe, Kent...E. G. Knowlton, Mantua.....2d Thursday, monthly

**Richland**.....B. F. Harding, Mansfield.....Chas. R. Keller, Mansfield...3d Thursday, monthly

**Stark**.....Perry King, Alliance.....George S. Hackett, Canton.....3d Tuesday, Jan. March, May,  
 July, Sept., Nov.

**Summit**.....D. W. Stevenson, Akron.....U. D. Seidel, Akron.....1st Tuesday, monthly

**Wayne**.....A. O. Smith, Wooster.....J. R. Jameson, Wooster.....2d Tuesday, Jan., April, July,  
 Oct.

**Seventh District**J. W. Collins, Toronto.....J. R. Mossgrove, Steubenville..

**Belmont**.....D. D. Piper, Shadyside.....J. S. McClellan, Bellaire.....2d Wednesday, monthly, at  
 1:45 p. m.

**Carroll**.....

**Columbiana**...P. C. Hartford, E. Palestine.....J. M. King, Wellsville.....2d Tuesday, monthly, alter-  
 nately, in Lisbon, Salem and  
 E. Liverpool.

**Coshocton**....Jesse McClain, Coshocton.....J. D. Lower, Coshocton.....4th Thursday, April, June,  
 Sept., Dec.

**Harrison**.....H. I. Heavilin, Cadiz.....R. P. Rusk, Cadiz.....1st Wednesday, monthly

**Jefferson**.....V. B. Di Loreto, Steubenville...J. R. Mossgrove, Steubenville.2d Tuesday, monthly

**Monroe**.....J. H. Pugh, Woodsfield.....2d Wednesday, monthly

**Tuscarawas**...H. A. Coleman, N. Philadelphia..E. D. Moore, N. Philadelphia..1st Tuesday, monthly

**Eighth District**J. G. McDougall, N. Lexington..Robert Miller, Hemlock.....

**Athens**.....J. M. Higgins, Athens.....T. A. Copeland, Athens.....1st Tuesday, monthly

**Fairfield**.....W. R. Coleman, Lancaster.....J. T. Farley, Lancaster.....2d and 4th Tuesday, monthly

**Guernsey**.....Fred W. Lane, Cambridge.....F. M. Mitchell, Cambridge.....1st and 3d Tuesday each month

**Licking**.....C. J. Loveless, Granville.....W. E. Shrontz, Newark.....Last Thursday, monthly

**Morgan**.....C. V. Davis, Pennsville.....C. E. Northup, McConnellsville.....1st Wednesday, monthly

**Muskingum**...D. J. Matthews, Zanesville.....Maurice Loebell, Zanesville.....2d Wednesday, monthly

**Noble**.....G. H. Zimmerman, Belle ValleyJ. L. Gray, Caldwell.....1st Thursday, monthly

**Perry**.....F. J. Crosbie, Junction City.....C. B. McDougal, New Lexington3d Thursday, monthly

**Washington**...C. J. Scott, Marietta.....F. E. McKim, Marietta.....2d Wednesday, monthly

**Ninth District**.C. E. Holzer, Gallipolis.....Milo Wilson, Gallipolis.....Gallipolis, 1920

**Gallia**.....C. G. Parker, Gallipolis.....Milo Wilson, Gallipolis.....1st Wednesday, monthly

**Hocking**.....E. A. Moore, Union Furnace...M. H. Cherrington, Logan.....

**Jackson**.....W. H. Parker, Wellston.....A. G. Ray, Jackson.....1st Tuesday, monthly

**Lawrence**.....T. H. Remy, Ironton.....E. E. Ellsworth, Ironton.....1st Thursday monthly

**Meigs**.....P. A. Jividen, Rutland.....L. A. Thomas, Middleport....1st Wednesday, April, July and  
 Oct.

**Pike**.....O. C. Andre, Waverly.....L. E. Wills, Waverly.....1st Monday, monthly

**Scioto**.....Wm. A. Ray, Portsmouth.....Harry Rapp, Portsmouth.....2d Monday, monthly

**Vinton**.....W. R. Moore, Orland .....O. S. Cox, McArthur.....4th Wednesday, monthly

**Tenth District**.Ralph W. Holmes, Chillicothe..S. J. Goodman, Columbus.....Chillicothe, 1920

**Crawford**.....H. H. Hartman, Galion.....M. L. Helfrich, Galion.....2d Thursday, monthly

**Delaware**.....F. V. Miller, Delaware.....V. B. Weller, Chillicothe.....1st Friday, each month

**Franklin**.....C. W. McGavran, Columbus.....James A. Beer, Columbus.....1st four Mondays

**Knox**.....H. W. Blair, Mt. Vernon.....J. R. Claypool, Mt. Vernon.....2d and 4th Wednesday, from  
 March to middle of Dec.

**Madison**.....G. M. Kerr, Lilly Chapel.....John W. Parker, London.....4th Thursday

**Morrow**.....R. L. Pierce, Mt. Gilead.....Carl E. Neal, Cardington.....1st Wednesday, monthly

**Ross**.....G. E. Robblins, Chillicothe.....G. S. Mytinger, Chillicothe.....1st Tuesday, monthly

**Union**.....H. G. Southard, Marysville.....F. C. Calloway, Marysville.....2d Tuesday

**Pickaway**.....J. B. May, New Holland.....D. V. Courtright, Circleville.....1st Friday, monthly

## NEWS NOTES OF OHIO

**Columbus**—Dr. Carl C. Hugger, Lieutenant, M. C., U. S. N., has been transferred from the United States Naval Hospital at the Naval Operating Base, Hampton Roads, Virginia, to the United States Naval Hospital at Brooklyn, New York.

**Versailles**—Dr. C. F. Ryan is spending the winter in Orange Center, Florida.

**Toledo**—Mrs. Jennie Fuller Smith, wife of Dr. Charles N. Smith, died at her home here recently.

**Urbana**—Dr. Robert S. Coppess has moved to this city from Dayton and is occupying the offices of the late Dr. Harry Cook.

**West Mansfield**—Fire originating in the office of Dr. Edwin C. Louthan, January 17, spread to his residence and another nearby building, causing damage to the extent of \$5,000.

**Tipppecanoe City**—Dr. Victor R. Small, who entered practice here following his discharge from military service, has assumed his new duties as pathologist at the state hospital at Dix Hill, Raleigh, North Carolina.

**DeGraff**—Dr. O. W. Loffer, whose second term as county auditor expired recently, has returned to this city for the practice of his profession.

**Ashtabula**—Dr. N. E. Stewart, a captain in the Medical Corps with the 115th Infantry during the World War, has received notice of his appointment as a major in the Reserve Corps.

**Marion**—Dr. C. E. Sawyer was among the speakers at a complimentary dinner held in New York recently honoring Dr. Thomas J. Preston, Jr., dean of New York Homeopathic Medical College and Flower Hospital.

**Jackson**—Dr. Haldor L. Gahm is serving with the rank of captain with the Medical Detachment of the 16th Infantry, Camp Zachary Taylor, Kentucky.

**New Philadelphia**—Dr. Joseph T. McLean, a former practitioner of this city, died at his home in New York City, January 28, from pneumonia following influenza.

**Ada**—Dr. Roy K. Evans has moved to this city from McGuffey, where he was formerly in practice.

**Bellefontaine**—Dr. C. K. Startzman has announced the opening of a completely equipped pathological and clinical laboratory. For two years before locating here Dr. Startzman was engaged as assistant in the pathological department of Indiana University School of Medicine.

**Bellaire**—Dr. William S. Warren was a patient at the local City Hospital in February, suffering from severe injuries, including a fractured upper jaw, sustained when his automobile skidded and fell on him.

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Correspondence with physicians is invited and will be welcome as we are anxious to demonstrate our desire to cooperate with them in every possible way.

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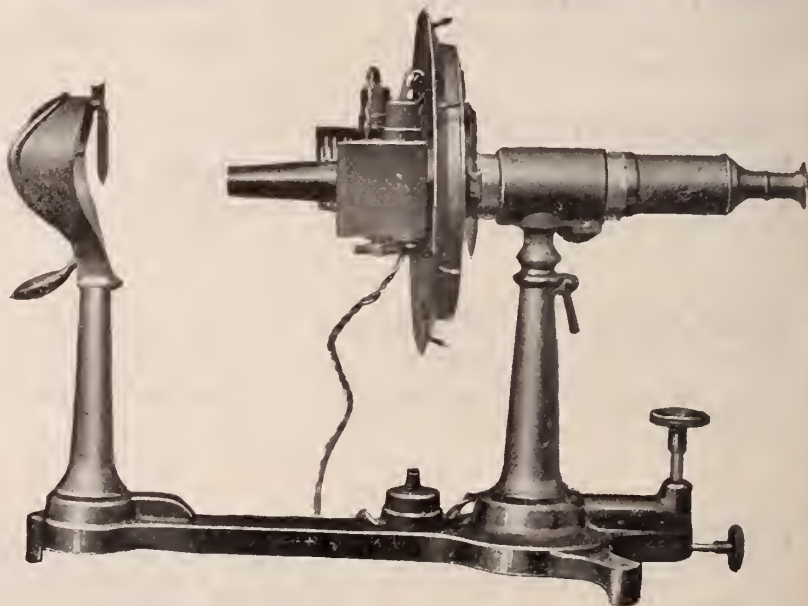
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# Ohio State Medical Journal

Published monthly by

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Telephones: Ohio State 4905; Bell Main 5259

This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.

Issued under the direction of the Publication Committee.

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## Next Meeting of the State Association, Toledo, 1920

## EDITORIAL COMMENT

by D. K. M.

### Your Annual Meeting

The dates and place are important. You already know them. This is merely a reminder of the seventy-fourth annual meeting of the Ohio State Medical Association—Toledo, Ohio, Tuesday, Wednesday and Thursday, June 1, 2 and 3, 1920.

With King Winter reluctant to lessen his grasp, with overcoat and coalpile still at hand in emergencies, the first of June seems very distant. Time, however, gallops for some and loiters for others according to the circumstances. "Were one doomed to be executed in June the dreaded day would appear to be close at hand, but to the expectant bridegroom, even tomorrow is a long time distant" was a remark recently heard in reference to the forthcoming meeting.

Section officers have completed a splendid scientific program. Following the usual order, the opening general session will be held at 11 a. m. Tuesday, June 1. The scientific program will start in the afternoon of that day at which time the sections on Surgery, Medicine, Obstetrics and Pediatrics, Eye, Ear, Nose and Throat; Dermatology, Proctology and G. U. Surgery; Nervous and Mental Diseases, and Hygiene and Sanitary Science will hold their first sessions.

The local committee on arrangements, headed by Dr. John G. Keller, councilor for the Fourth District, has promised something of interest every minute throughout the three days of the meeting. Plans are under way in addition to the program proper, the annual banquet, the exhibits and scientific section meetings, for a symposium on economic, social and political problems. It is quite probable that the future problems of the medical profession in Ohio towards legislative questions will be determined at that time.

A large number of the county societies have elected and reported to the state headquarters the names of delegates and alternates who will represent their respective societies in the three sessions of the House of Delegates. Those societies which have not yet elected such delegates nor reported them to the state offices, should do so at an early date.

### An Appreciation

The Star-Republican published at Blanchester, Ohio, and edited by Lieutenant Governor Clarence J. Brown, in a recent issue carried an editorial on "The Country Doctor." It is of interest primarily in indicating the attitude toward the medical profession in the mind of a prominent state official. Throughout his official career, Lieutenant Governor Brown has shown

a friendliness toward the profession and his acts have shown a clear conception of ethical medical standards and scientific medical service as distinguished from cultism.

His editorial is herewith reproduced:

"The country doctor is neither a philanthropist nor a pickpocket. Nor is he prince or pauper. He is not always the most skilled nor the most learned of his profession, but he has the most human heart. Neither is he always the most efficient, but he is the hardest worker of his class.

"To the many who first see the light of day in rural surroundings he is the Father Confessor. He is the one to whom they turn in the moments that try men's souls. Their own burdens are lightened by placing a part of them upon the shoulders of the country doctor. In sickness and death he is always with them. Not as a physician of the body alone, but oft-times as the healer of hurts and pains far more deep. In health and prosperity he rejoices with them. A keen and kindly interest is always taken in their successes. In their reverses he sympathizes with them.

"The ranks of the country doctor are growing thin. Higher remuneration and easier hours have caused many of the young men entering the field to turn their eyes from the duties of the country to the more alluring work in the cities. The scarcity of practitioners in the country districts is growing alarming. Something should and must be done. For the young man entering into life no greater opportunity for serving mankind could be found. It is our hope that many will see the light and take advantage thereof."

#### A Message from Garcia

With the proposed plan of a substantially increased local medical organization in Cleveland as the text, George V. Sheridan, former executive secretary of the Ohio State Medical Association, has written a communication to *The Journal* in which he forcefully and directly discusses fundamental problems confronting the medical profession in this state. This message which is of interest to every member of the profession is reproduced in full on page 277 of this issue.

"Back of any effective state wide effort there must be adequate local organization," is one of the points emphasized by Mr. Sheridan.

"This matter of dues which is vital, should be approached by the physician in a manner entirely different from that to which he is accustomed. He should view it in the light that a business man regards his trade or business association. The man in business frankly recognizes its value to his business and its need to the continuance of his business, and pays accordingly. In almost every line of commerce the trade association is viewed as one of the factors in the cost of producing the article and the cost of that association affiliation is charged up as a cost of production," declares Sheridan.

"Scientific medicine is facing a death struggle and unless the honest practice of medicine is protected by those who appreciate its possibilities for good, it will be so hampered and handicapped that its practice will be unattractive.

"Personally, I think that compulsory state health insurance is a harmful thing for the state, and a ruinous thing for medicine. It will reduce medical practice to a plane where the incentive for brilliant service is removed, and where a premium will be laid on mediocrity.

"I believe that if the physicians of this country will effect a first-class organization they can develop education which will make this fact evident to the country—and off-set the undoubtedly effective propaganda of the long-haired and pinch-headed social reformers. Unless such organization is effective, speedily, this half-baked crew will foist this prussianized scheme on us. The New York state legislature's antics certainly made that point clear."

In the above manner Mr. Sheridan refers convincingly to the impending problem of state compulsory state health insurance.

In his message he also emphasizes another fundamental truth that the best interests of the public are co-incidental to the best interests of the profession, and that protecting what might be termed the selfish interests of the medical profession has become identical with protecting the best interests of the great public.

#### A Phase of Fraudulent Advertising

In their efforts to mislead prospective patients, a number of chiropractors have undertaken through advertisements to leave the impression among readers that they served in the late war in connection with the medical department of the Army, and that after the Armistice they completed studies at the expense of the government.

The government of the United States has never recognized chiropractic or any of the pseudo-medical cults. Most of the cult practitioners who served in the late war were privates who had no active work in connection with the treatment of the sick and wounded soldiers. Some newspapers have been imposed upon to the extent of publishing as news items statements that this or that chiropractor had practiced as such while in the Army. Advertisements have appeared carrying such statements as "I served in base hospitals and at the front."

Investigation of these blatant claims has shown them to be absolutely groundless. A statement issued from the office of the Surgeon General in Washington recently states:

"The Medical Department of the Army does not recognize chiropractic medicine, nor are graduates of schools of chiropraxy recognized or employed in any capacity by the Medical Department of the Army.

"This office has no knowledge of any course of instruction conducted under the direction of the government for the purpose of qualifying men for chiropractic medicine."

#### Poet Physician

From the pen of Dr. Thomas J. Savage, Xenia, Ohio, has just been published an attractive vol-



ume of poems comprising 200 pages, entitled "The Old Doctor's Vision and Other Poems," (which retails at \$2.00 per copy).

In his dedication, the author states "To those who read poetry for pastime, or for the purpose of getting the author's point of view, or that of his characters, rather than for classical study; for the sake of the argument, rather than for the perfection of poetic style or beauty of rhythm, this little volume is respectfully and lovingly dedicated."

The longest of the poems in the volume, "The Old Doctor's Vision," was composed some years ago and recited at a banquet given the physicians of Montgomery County by the Greene County Medical Society at Xenia.

Throughout this volume the poems for which were written during a number of years, reference is made to incidents of the Civil and the recent World War, together with contemporary political allusions, local and national, including the much discussed League of Nations.

Throughout his work Dr. Savage indicates a strong sentiment for prohibition and against quackery and cultism. The latter is particularly in evidence in the title poem of the volume.

A Kiplingesque style and spirit with a reflection of Burns at his best, are also to be found, as well as a depth of human understanding and fellowship, as for example one of the shorter poems here reproduced:

#### THE SCOFFER

I would not number on my list of friends,  
Though graced with all the polish of a Chesterfield,  
Yet lacking human sympathy,  
The man who scoffs at want and wretchedness  
He sees on ev'ry hand;  
For 'tis but fortune's accident of birth, and no  
way proves  
The worth or lack of it, which marks the truly  
great  
From common loafer on the busy strand.  
What matters whether bare or shod the feet, or  
gloved the hands,  
Of one who works, or wanders idly o'er the  
shifting sands?  
If he be upright and follow honor's paths to reach  
the goal  
Where his ambition points,  
I care not if his coffers groan with gold,  
And silver hinges brace his wabbling joints;  
Or if he struggles on through sweat and tears,  
The weary journey of the artisan,  
To reach at last the acme of the years;  
For gold alone can never make a man.

#### Quackery and the Laws' Delay

Verily "justice" as determined by courts of law and equity is sometimes not only strange but inconsistent.

With the enactment by the last legislature of Ohio of the Talley law (H. B. 176) strengthening the penalty section of the medical practice act, Ohio was in a fair way to combat quackery and protect the public against ignorant and unin-

formed charlatans to a greater degree than any other state in the Union. Ohio perhaps did not and does not at the present time need a housecleaning as badly as some of the other states. The process of sterilization in the field of healing had progressed a pace under the administration of this law by the State Medical Board until a group of unlicensed chiropractors, prosecutions against most of whom were then pending in the courts, filed application to restrain the Board from administering the law on the ground of unfair and illegal discrimination.

Despite the fact that the laws of Ohio vest in the Medical Board power to establish rules and regulations governing "limited practice" including chiropractic, Judge Powell of the Common Pleas Court of Cuyahoga County before whom the case was heard, held in effect that the State Medical Board had exceeded its authority in prescribing what a course of chiropractic should be in order to first recognize a school teaching such limited branch, and further that the Board was without authority to define chiropractic since it was not defined in the law, and that when the legislature recognized chiropractic and other limited branches by the enactment of the Platt-Ellis law in 1915, the Board's right of fixing standards was governed by the recognition of the best schools of chiropractic and other limited branches in existence at that time.

It is significant that the appeal from Judge Powell's decision has been made to the Court of Appeals which in a unanimous opinion concurred in recently by the Supreme Court of Ohio, held that the State Medical Board is empowered by the law to determine the qualifications of those engaged in limited practice.

This legal opinion rendered in the case of Shaw vs. the state and written by Judge Dunlap is a real masterpiece, detailed excerpts from which are carried on page 271 of this issue, together with the conflicting opinion rendered against the State Medical Board by Judge Powell in Cleveland.

The most unfortunate phase of the situation is that which precludes the State Medical Board from continuing prosecutions against unlicensed chiropractors until the final determination of the case. One solution of the dilemma might lie in action by the State Medical Board to admit to the examinations in June those unlicensed practitioners of limited branches of medicine in the subjects of anatomy, physiology, chemistry, bacteriology, pathology, hygiene and diagnosis, which are so conclusively recognized as fundamentally necessary before any practitioner or any school or cult can intelligently treat human ailments, and authority for which can readily be found in the legal opinion referred to, and rendered by Judge Dunlap.

It is interesting to know that the recent decision restraining the Board from prosecuting unlicensed chiropractors followed immediately an

annual conference in Chicago at which executive officers of state medical boards and board of licensure discussed the problem of dealing with law violators and at which meeting it developed that many other states were in a worse dilemma than Ohio. This may be said to be true of Illinois which has a system of examination and licensure for all branches in which the state requires examination and over which it has direct supervision.

### Land of the Pilgrim's Pride

Apropos to the problem presented by a suggestion of paternalism or nationalization of physicians is a thought cleverly expressed editorially in a recent issue of the Cincinnati Enquirer to the effect that private enterprise is the main-spring of life, national success and progress, and that state ownership or excessive control stifles proper ambition, destroys individual initiative, and paralyzes healthy energy.

This editorial under the above heading is here quoted in part:

"Time was, and that not so long ago, when every American was proud of his native land; proud of its freedom, which guaranteed personal independence; proud of its tolerance, a tolerance without parallel in other lands; proud of its achievements in statesmanship, in war, in social development. But where today is that intangible but real thing we once realized as Americanism?"

"The past few years have witnessed the greatest, most radical, social and industrial changes within the experience of the Republic. These changes manifested themselves quickly. The people have not realized the dangers of this sinister corrosion. In these years we saw the Government take control of railroads and telegraphs. We are witnessing the imposition of prohibition, a principle which changes the habits of centuries by legal coercion, or assumes to do so. We are witnessing interpretations of the organic law by its highest administrators divided in opinion. We are observing the growing suppression of individualism. This suppression and all sacrifice for the common good during times of national emergency willingly is submitted to, the necessity for such action admitted. But with the passing of the emergency we must protest against such forms of Socialism. We want none of the paternalism vaunted by sophistical and impractical dreamers. We want none of the proletarianism now urged by those who would sweep away all the barriers to decent civilization which men have erected for its safeguarding and perpetuity. The only ism tolerable in this land where our fathers died is Americanism.

"Let the people own the railroads, the telegraph system, the coal mines as individuals. It is not the business of a democracy to build up an army of employees in the service of the state. Private enterprise is the mainspring of right national success and progress. State ownership means the death of proper ambitions, the destruction of individual initiative, the paralysis of healthy energy."

### Federal Regulations Strictly Enforced

Regulations issued for the enforcement of the national prohibition law (detailed analysis of which was made on page 175 of the March issue)

and those for the enforcement of the narcotic law (analysis on page 569 of the September Journal), place a burden of responsibility upon each individual physician which can be properly met only as each of them realizes and conforms to his obligations to himself, his profession and to the law.

The federal government has clearly indicated a policy of "reason" in undertaking prosecution of violators only where the professional license of a physician is used as a cloak for trafficking in liquors or drugs; prosecution is not expected even in violations of the law which are merely technical. The obligation, however, rests upon the physician to adhere to the law and regulations. The burden is always on the physician who prescribes liquors or narcotics to know that the particular case is an exception to the general rule, and if the laws at times seem a trifle irksome, it is well to bear in mind that they were not made to hamper the legitimate practitioner, but to prevent the comparatively few weak or unscrupulous from an illicit practice.

Whiskey and other alcoholic preparations can only be prescribed for patients seriously ill and under the personal attention of a physician holding a license authorizing him so to do.

It is significant that up to the middle of March only 150 Ohio physicians had qualified to prescribe intoxicants.

Being located in Columbus, the office of the State Medical Association is in close touch with the various federal and state departments and will gladly secure special rulings or serve as an intermediary in dealing with such departments.

### The Physician in Politics

While it is not practical or even desirable for the State Association or any of its component bodies as such to enter politics, the physician as an individual enjoying the privileges of citizenship, owes certain duties to his community, state and nation. He cannot fully discharge his obligation unless he keeps informed of the trend in government and participates as an individual in those movements for the betterment and further advancement in welfare of himself, his family, his community and incidentally his profession.

A physician cannot, of course, make politics his principal occupation and it should not be made a fad. The medical practice of a physician is his first concern and must ever be, and aside from his necessary vacation, any diversion must occupy his spare time. It is a difficult matter to arrange political connections in such a manner.

The purposes of medical organization are principally scientific and educational, and permit political practices only to the extent necessary to secure the enactment and enforcement of just medical laws, and to guard and foster the material interests of its members, and to protect them against imposition; and, to enlighten and direct public opinion in regard to the great prob-



lems of state medicine. In addition, the personal interest and opinions of its members are entirely too divergent to expect them to agree upon policies or principles of government, except in so far as they bear upon the practice of medicine or upon the public health.

On this important subject, a contemporary has the following to say:

"Never in the history of the world, and certainly not in the history of our own country, have the forces of disorganization been so active. Never before have so many of our otherwise substantial citizens been led astray by false and undemocratic doctrines, or by prejudice or personal interests, and just now, when our people are fully aroused on the question of public health, and in mental condition to appreciate the need of scientific medical education in those who practice medicine, the spirit of Bolshevism, so generally prevalent, is in grave danger of upsetting the entire situation.

"It is not necessary for the State Medical Association as an organization to enter politics. It is, however, necessary that the State Medical Association study those problems in which it is particularly concerned, and that it in unequivocal terms announce itself in support of its principles and those who practice them; and conversely, that it condemn antagonistic principles and persons. As between those who hold as we do, there can be no discrimination. That would be politics. Let's get this idea clear in our minds. There are certain functions of the government with which the medical profession is closely concerned and in which it is very much interested. There are certain principles involved concerning which the medical profession is in a better position than any other class of our citizenship to judge. There are those aspiring to office who either advocate or condemn one or the other of these principles. It is our function, and our duty, to understand these things and to support the one and condemn the other. To this extent the organized medical profession must enter politics, and to this extent the purposes of the organization contemplate that we shall enter it.

"This is an important year in this connection. The great majority of those who will make our laws or unmake them, are to be elected this year. Those who are to execute them are also to be elected. We must become active and must let the politicians know that we are active. It has been said, and often repeated, that the medical profession could not agree upon anything, and if any politician has concerned himself very much with what physicians say it has been for personal reasons or for particular reasons that he believed were not general. When it comes to those affairs to which we have referred, there should be little difference of opinion among physicians. The fact that there is but proves the rule of human nature. We may be sure that those who would undo the medical profession and antagonize the interests of the public health will be active and will enter politics in all of its departments. If we are to continue to succeed in protecting the interests of our people and the interests of the medical profession, we must be active and conservatively militant."

#### A New Ray of Hope

That the day is not far distant when the medical profession in each community will be coordinated for all worthy and effective efforts is indicated in the latest innovation of the Cincinnati Academy of Medicine which comes to this

office in the form of the *Cincinnati Journal of Medicine*, Volume One, Number 1, as the official organ of the Academy of Medicine.

In the salutatory, Dr. C. L. Bonifield, the editor, points out that the profession of Cincinnati should regard the journal as their property for their service and as the mutual medium of expression.

This journal expects not only to publish the proceedings of the Academy, but also those of the Obstetrical Society, the Drake Medical Society and the West End Medical Society.

Some time ago Dr. Robert Carothers, then president of the Academy and for years active as Councilor in the State Association from the First District, appointed a committee to devise ways and means for publishing such a journal. Dr. Bonifield, the editor, was made chairman of that committee. It was decided to organize a stock company to do the publishing, the stock was divided into shares on the par value of \$10.00 each, and the incorporators are soliciting the aid of each physician in Cincinnati who has the interest of his profession at heart, to subscribe for at least one share. The directors who have been selected and who will serve not only as publishing managers but as managing editors, are Drs. W. D. Haines, Dudley Palmer, Charles T. Souther, Otto Seibert and C. L. Bonifield.

The initial number carried practically in full the report recently submitted by a special committee of the Cleveland Academy of Medicine (copy of which was published in the March issue of this *Journal*), outlining a comprehensive plan for the extension of functions and activities of a local medical society.

#### "Divine Healing"

At a time when the nation is suffering with a bad case of nerves, when people are prone to run after strange gods and practice strange rites, ignoring the truth mighty as it is, of established standards, it is encouraging to observe that the saner ministers of the church realize that "prayer" can never fulfill the scientific and physical functions of materia medica, surgery and inoculation against disease.

The lay press has recently given much space to the discussion on "Divine Healing" in reproducing a number of diverse views on the subject. A well-known, clear-thinking minister conclusively answers the religious faddists in the following fashion:

"I believe I am safe in saying that neither the First Methodist Church nor Methodism as a denomination will ever indorse any movement which aims at the healing of afflicted persons by drugless means or purely through the power of prayer. The Methodist church, too sane to discount the science of the centuries, believes in materia medica, in surgery and in inoculation for disease. while at the same time we are convinced that all healing is divine.

"The truth is that even the brain of the physician is a part of nature, through which God works. The profession of the doctor or the sur-

geon is as sacred as that of the minister, and, while physician and minister should co-operate in their efforts to relieve the world's distress, the two professions are distinct and should be so recognized. I might pray all day for my evening meal, but if I did not get out and work, all my prayers would not bring my supper—and shouldn't. The Lord never performed a miracle that He did not employ both human instrumentality and the forces of nature. I hope I will not be misunderstood. I believe in the power of prayer, but prayer consists in something more than words. To really pray for anything means to desire it so ardently, that one is willing to make an effort on his own part to obtain it. In the Methodist church we pray for the afflicted, but we first try to see to it that the patient is attended by a good doctor, and that the food and environment of the sufferer is all that it should be."

### State Compensation

Following the recent submission to the State Industrial Commission of a suggested new medical fee schedule under the workmen's compensation law, by a special committee representing the State Association, indications point toward an early adoption of a schedule substantially more adequate than that at present in operation.

As stated in the last issue of *The Journal*, this committee recognized a "flat rate" schedule which would cover original attention or operation and subsequent treatment.

A number of other states have recently adopted a new basis for remuneration to physicians who render service on cases coming under workmen's compensation laws. These increases so far established have averaged somewhat over one-third additional to the old schedule.

Ohio undoubtedly has the most effective compensation act in the country and those in charge of its enforcement have recognized more and more the necessity of securing the best possible medical attention and the imperative need of more adequate compensation for such service.

The direct responsibility for securing for the injured employe those benefits to which he is entitled, rest primarily on the medical profession. The employer, the insurance carrier, the commission, and the general public depend on the physician for right guidance as to kind and character of treatment calculated to restore the injured employe as promptly and as fully as the nature of the injury permits.

The law provides that the employe accidentally injured in the course of his employment shall be entitled to compensation from the employer. Compensation is of a two-fold nature; that is to say, medical, surgical and hospital attendance, on the one hand, and money indemnity for loss of wage, on the other. They are inseparably linked. The better the medical attendance, the smaller the indemnity charge. The poorer and more unskilled the one, the greater the other. But as the character of the medical attendance depreciates in quality, the disability and resulting indemnity increase out of proportion; that is to say, the

ultimate cost of a given case treated meagerly or unskillfully in its medical aspect is much more costly to both employer and employe than if given the best of medical attendance. The difference between major disabilities and minor ones is often just a matter of whether or not prompt, skillful medical attendance was provided. With it, the man returns to his work happy and contented after a few days of inconvenience.

With a proof of fair dealing toward the profession by the commission, its medical examiner and claims department, the effectiveness of the law is made possible. It may not be altogether improper to remind the physician that a great many of the delays, disapprovals and questions have been minimized and eliminated by maintaining contact through the headquarters of the State Association.

### Health Insurance Inevitable?

As pointed out in an editorial in last month's issue of *The Journal*, the special committee of the State Association on health insurance urges that the medical profession of Ohio study the medical situation in Great Britain and other foreign countries so that a repetition of a similar situation relative to medical practice and state supervision in this country or at least in this state may be prevented or prepared for. If state health insurance is to come, the medical profession must be made ready with a comprehensive plan for handling it.

The governor of New York has announced that at the coming session of the state legislature an effort will be made to pass a bill, backed by the New York Federation of Labor providing for compulsory state health insurance. The medical society of the state of New York has gone on record as unanimously opposed to any law instituting a system of compulsory health insurance.

The outcome of this clear cut fight will probably determine its future course in other states.

While such a law would not nationalize the medical profession to the extent of eliminating private medical services, it is a step in that direction and would place a large part of the medical profession in the pay of the government.

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A recent issue of *The Lancet* called attention to a scheme proposed by Dr. Davis McKail and Mr. William Jones of Glasgow and worked out most carefully for the organization of physicians, clinics and hospitals for the care of the sick as provided by state insurance. This scheme is based on an organization of activities made necessary and adopted during the war period in Glasgow. A population of one hundred thousand is taken as a unit and the plan is to organize a staff of fifty-three physicians, some rated as seniors receiving \$4000 to \$4500 a year, the remaining juniors at \$2500 to \$3500. Each physician works thirty-three hours a week and the different



branches of medicine and surgery in a central clinic, and outside calls are systematically provided for. This system is proposed in an effort to improve the medical situation in Glasgow.

How would you consider this goal for years of research, careful study and arduous effort?

We believe the average financial return should be commensurable with the service rendered and this surely should be large enough to induce young men of high calibre to choose medicine for life's calling, with sufficient incentive to make it an efficient as well as noble service to mankind.

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The commission in Illinois found that the number of wage-earners in Illinois on July 1, 1918, is estimated at 1,850,000, and their dependents at something over 2,700,000. The group embraced within the investigations required of the commission may be estimated at 4,600,000, or more than seven-tenths of the entire population. It is apparent, therefore, speaking broadly, that whatever affects the wage-earners and their families is of concern to the people as a whole; and whatever affects the people as a whole affects the wage-earners and their families.

Any statement of a proportional responsibility of the state, industry or the individual as factors causing disease in the aggregate is without basis in ascertained fact or creditable evidence.

It is apparent that compulsory health insurance system comes in contact with so many interests of the individuals or groups who constitute society and affects them so vitally that the question must be solved in the light of a public demand or necessity, and the welfare of the people of the state as a whole.

Compulsory health insurance should be tested by what it has accomplished. What has it accomplished in those countries where it has been adopted? There is no evidence that compulsory insurance has resulted in an improvement in health. The death rates and morbidity statistics of the countries which do not have compulsory health insurance show a decline fully equal to that of the countries which have such systems.

\* \* \* \*

It is estimated that a system of compulsory state health insurance in Ohio would cost the taxpayers annually, approximately one hundred million dollars. The beneficiaries, if any, would be a comparatively small proportion of the population.

As to the inevitability of compulsory health insurance, the committee on public information of the Medical Society of the County of Schenectady, New York, has recently issued an interesting bulletin from which the following is an extract:

"We had heard for several years the often repeated statement that Compulsory Health Insurance was inevitable and that the medical profession had better make the best of it. When we came to study the actual data at hand we found several very interesting facts which are briefly

as follows:

"Ninety per cent. of the 'inevitability' talk can be traced directly to comparatively a few propagandists for Compulsory Health Insurance. It is part of the propaganda.

"Only an overwhelming popular demand will make inevitable a law which will reverse the very history of the state and substitute for a policy of individual liberty and self help a policy of control of the individual and state help. There is in this state almost no popular demand for any such change.

"The only persons who are alleged to benefit from this distinct class legislation are the laboring people. It is well known that the farmers, the merchants, the manufacturers and the common people are against Compulsory Health Insurance. Even labor is not in favor of Compulsory Health Insurance.

"In California last fall the whole stage was set in favor of Compulsory Health Insurance. The legislature had passed a constitutional amendment in favor of it. Hiram Johnson was in favor of it. The so-called commission to investigate the subject, composed chiefly of American Association of Labor Legislation propagandists, had reported in favor of Compulsory Health Insurance. The professional labor leaders were for it. There was an intense education campaign extending over the entire state. *When the question came to a state wide popular vote compulsory health insurance was defeated by a vote of nearly 3-1 and Labor did not support the measure.*

"In Utica last spring there was a campaign of education on the subject followed by a popular vote on the subject. Thirteen thousand factory employees voted on the subject. Did they vote for it, or 2-1 against it, or even 10-1 against it? *No, they voted 12,875 to 112 or 100-1 against Compulsory Health Insurance.*

"Any law which is fundamentally unjust; which demands that industry pay fifty per cent. of the costs when industry is responsible for less than one per cent; which teaches the doctrine that it is unhealthy to work; and which substitutes a policy of control of the individual and forced charity for the policy which has made this country what it is—such a law is not in our opinion inevitable." \* \* \* \*

The necessity for a course of clear thinking, consistent and co-operative activity is evident, for health insurance is impending within the near future. Pessimism must not be allowed to develop into hysteria. If it is true that labor will be the only direct beneficiary under such a system, with the high wages it now receives, it will probably not wish to pauperize itself in accepting compulsory charity through which system the medical practitioners would be the true donors.

As fundamental the question may be propounded—can the state practically confiscate the services of the trained physician and still demand the best ethical and medical skill obtainable?

## Some Brief Points in Abdominal Technique\*

J. F. Baldwin, A. M., M. D., F. A. C. S., Columbus  
Surgeon to Grant Hospital

**Editor's Note.**—It is of great interest occasionally to have some one of broad experience and critical judgment to review certain points in operative technique from the results obtained in a large series of cases. Dr. Baldwin has done this in his present paper in which he discusses briefly but in a telling manner such points as the best sorts of incisions; cutting the round ligaments; the ovarian blood supply; handling retroversions; routine appendectomy; the reef-knot in ligating; peritonealization; removal of the cervix and gall bladder. While many surgeons differ considerably in regard to personal details of technique there is no getting away from the verdict arrived at by uniform success. This is the criterion on which imitation must be based. In concluding his paper, Dr. Baldwin emphasizes the fact that irrespective of any other condition abdominal operations cannot be prolonged beyond one hour's duration without being fraught with danger. It will be some time, however, before surgery becomes standardized to the point Dr. Baldwin maintains that under ordinary circumstances a pan-hysterectomy, appendectomy and cholecystectomy can be readily made within an hour's time, with practically no hemorrhage or shock.

**I** WISH to offer to abdominal surgeons a few suggestions in technique, these suggestions being based on an unusually large experience, and that experience gained in a private hospital where patients are studied closely from start to finish, rather than in a hospital where the operator pays little attention to the history or after-treatment of his cases.

### FASCIAL INCISION

(1) In making an abdominal incision the fascia should be exposed, and by holding the knife at a suitable angle should be freed of fat about a quarter or a half inch on each side of the intended fascial incision. This cleaning off is done in order that in closing the incision no fat may be interposed to interfere with solid union. After the fascia is incised in a median incision the bellies of the recti muscles should be exposed so that in closing they may be whipped together to still further act as a guard against post-operative hernia.

### MODIFIED PFANNENSTEIL INCISION

(2) In cases of patients in whom it is important to avoid a scar, I have frequently used a modification of the Pfannensteil incision. I make the incision through the skin and fat as advised by that operator, but do not incise the aponeurosis. The flap is dissected up nearly to the navel. It is then pulled up and a median incision made in the usual way. The opening will be found of ample size for ordinary pelvic operations. This median incision is closed in the usual way, and then the flap is brought down and sewed in place by continuous catgut suture running back and forth so as to do away with all possibility of oozing. The skin is then closed in the usual way and dressings applied. Formerly I trusted to drainage under this flap, and simply united the skin; but increased experience has led me to greatly prefer the positive closure by this buried suture.

### CUTTING ROUND LIGAMENTS

(3) Without a single exception, so far as I

know, our text books in describing abdominal hysterectomy represent the round ligaments on each side as carefully ligated or clamped in two places so that the cut may be made between. All of this is entirely superfluous. The round ligament can be cut across freely as its tiny artery which runs from the uterus out to the abdominal wall is so small that although I have cut it literally thousands of times I have never known it to bleed. It is evident that writers have followed each other as sheep follow a bellwether.

### OVARIAN BLOOD SUPPLY

(4) Several investigators have shown that the blood supply to the ovary is much better preserved, when the uterus is removed, if the tubes can be saved. Of course if we are dealing with badly infected tubes their removal is essential, but in very many cases the tubes can be ligated close to the uterus and in that way the ovary be saved with ample blood supply. Since adopting this method I have had practically no trouble with cystic degeneration of retained ovaries after hysterectomy.

### HANDLING RETROVERSION

(5) In cases of retroversion, when it is desired to retain the power of child-bearing, I usually shorten the ligaments by the Baldy method; that is, the round ligaments are pulled through the broad ligaments below the tube and ovarian ligament and attached to each other back of the fundus. I usually scarify the surface which is to be covered by the ligaments so as to secure more prompt and solid union. In many cases of retroversion it will be found that the utero-vesical fold has dropped down so that instead of being reflected from the bladder to the uterus it is really reflected from the bladder to the vaginal wall. This results in the formation of a deep pocket in front when the ligaments are shortened, and into this pocket the small intestines will drop and thus will tend to again press the uterus backward. To obviate this I catch the utero-vesical fold at the proper point with tissue forceps, make a transverse incision, undermine and separate the peritoneum from the bladder sufficiently, and

\*Read before the Surgical Section of the Ohio State Medical Association during the 73rd Annual Meeting at Columbus, May 7, 1919.



then attach this flap to the uterus well up toward the fundus. Two or three interrupted stitches can be placed so as to secure complete apposition. This obliterates the pocket and still farther tends to hold the fundus forward.

#### ROUTINE APPENDECTOMY

(6) So far as I know I was the first surgeon to openly advocate the routine removal of the appendix in all cases in which for any reason the abdomen was opened, except when conditions were so serious as to preclude the loss of even a minute for that minor procedure. I think all surgeons now take the same view, but the technique which is used by many is exceedingly complicated and absolutely unnecessary. In my early years I laboriously inverted the stump and buried it by a purse string suture, but for many years, and in many thousands of cases, I have simplified my technique to what seems to be the vanishing point of simplicity and safety. The meso-appendix is transfixed and ligated by a catgut which is pulled through on withdrawing the transfixing hemostat. The meso-appendix is then cut across and the appendix tied at its base with a chromic catgut ligature. The appendix if empty is simply cut across just beyond the ligature, or if it contains fluid it is clamped just beyond the ligature and cut above the clamp. By still holding the ligature the stump of the appendix is kept in view, and its mucous membrane is then thoroughly cauterized by full strength carboloid acid. Formerly, when we were taught that alcohol was the chemical antidote of carboloid acid, I followed the lead of others and applied a few drops of alcohol; but when it was later shown that alcohol was not the antidote of carboloid acid, I omitted that step and thus saved a few seconds of time. Now, after applying the carboloid acid the stump is wiped off so as to get rid of any excess, the ligature cut short, and the whole thing dropped.

Other surgeons have more than once called attention to the danger of burying the stump by means of a purse string catching the peritoneum. When this purse string is used the stump is placed in a pocket cut off from the general peritoneal cavity, and the conditions are most eminently favorable for the culture of any germs which may be connected with the appendiceal stump. Furthermore, the purse string interferes with the blood supply to the wall of the cecum at the point involved, and cases have been reported in which the area thus surrounded has sloughed with prompt disaster. I have seen one such fatality at the hands of a brother surgeon. He had carefully buried his stump by this purse string; the patient did well for two or three days, then suddenly went to the bad, and on re-opening the abdomen the operator found a hole corresponding to his purse string through which the finger could be passed, and through which fecal matter had been escaping. The patient promptly died.

Out of the many thousands of cases operated upon by the above technique, I have not had a single instance of post-operative ileus from adhesions to the tiny stump left exposed. In a small number of these cases I have had to re-operate years afterwards for some reason or other, and examination of the field of the former operation has shown everything in perfect condition.

#### THE REEF KNOT IN LIGATING

(7) In operating, a properly applied catgut ligature tied with a reef knot will never slip. That is, the knot will not slip; but if the operator has cut the protruding button of tissue too short, that tissue may draw itself back so that the ligature slips over the end of it; but a third tie to the knot can by no possibility obviate such a retraction of the stump. If a man ties a granny-knot then he had better add a third for safety, but with a reef knot the third loop is entirely unnecessary, wastes time, and leaves an increased amount of foreign material to be cared for by the phagocytes. I have trusted to the reef knot under these circumstances in certainly more than one hundred thousand cases, and have never yet had a secondary hemorrhage in consequence. One precaution should be taken in tying any ligature; namely, after the first knot so hold the ligature that the ends are kept taut until the second knot is drawn home. If this precaution is not taken the first knot may loosen before the second is applied, and thus the ligature is left loose and with conditions favorable for the retraction of the ligated tissue. There is a little knack in thus holding the ends taut but it is easily acquired.

#### PERITONEALIZATION

(8) In making pelvic operations, and particularly in making an abdominal hysterectomy, it is of prime importance that all raw surfaces should be covered by peritoneum, and any technique which does not provide for this covering is distinctly faulty. In a recent issue of the *American Journal of Surgery*, a writer describes his technique, and a glance at his illustrations shows that his peritonealization is very incomplete. My assistant and myself were looking at his pictures together, and both of us called attention to that failure. I was not surprised, therefore, in reading the accompanying text to find that he had had a considerable number of fatalities from post-operative ileus, something which he would not have had had he left a smooth floor.

In some cases where there have been extensive adhesions in the pelvis, it is impossible by ordinary methods to cover the raw surface with peritoneum. In such cases I open the vagina, either by a free incision through the cul-de-sac, or if I have made a pan-hysterectomy by splitting the posterior vaginal wall down after implanting the round ligaments for the support of the vagina;

then from above I introduce a light gauze fluff, one end being pushed down into the vagina and the gauze made to lightly fill the cul-de-sac. Over this I swing around the sigmoid, attaching it to the peritoneal edge so that I make a complete roof to the pelvis and a complete floor to the abdomen, and thus secure a perfect peritonealization. The gauze is left in for six or seven days and then withdrawn. Its purpose is to serve as a support to the mobilized sigmoid and to absorb any oozing which might take place from the raw surface.

#### REMOVAL OF THE CERVIX

(9) I have for a number of years been a firm advocate of the importance of removing the cervix in all cases in which a hysterectomy is made. Now and then there are complications present of such a character that the removal of the cervix would materially prolong the time of operation, but such complications are exceedingly rare, and will almost never be present if the operator has acquired sufficient skill. The dangers of leaving the cervix are chiefly the possibility of malignant degeneration. I have personally met with eleven cases, some of which I had operated myself years ago, in which the cervix thus left became the seat of cancerous development. In many other cases though cancer does not develop the patient is annoyed by a persistent and distressing leucorrhea, this coming of course from the cervical follicles. If the cervical canal is thoroughly dissected out by the operator, then there would be no such leucorrhea, and the danger of malignancy would be very greatly diminished, but with the proper technique it is much simpler to remove the whole cervix than to thus reduce it to a shell.

The main argument against such removal of the cervix is the increased danger of peritonitis from infection coming from the vagina. This, however, is obviated if the surgeon will thoroughly wash out the vagina as the first step of his operation, then seize the cervix with a volsellum, and inject some full strength tincture of iodine into the cavity of the uterus by means of a glass pipette to which is attached a rubber bulb. The pipette fits the cervix snugly so that the iodine can be forced into the cavity of the uterus, but some care should be exercised not to use such force as will possibly carry the iodine through the fallopian tubes into the pelvis. On withdrawing the pipette the cervix and upper vagina should be treated with the iodine, and then the entire vagina flushed with tincture of iodine reduced to about one-fourth strength. This serves to dilute the full strength of the iodine and thus obviates any resulting vaginal irritation. All surplus iodine is wiped out at once with gauze, and the operation then proceeded with. Since adopting this method I have had no fatalities from peritonitis, which could by any possibility be attributed to the removal of the cervix.

#### REMOVAL OF GALL BLADDER

(10) Removal of a badly diseased gall bladder by the methods usually employed, particularly in cases in which extensive adhesions are present, results in the re-formation of extensive adhesions binding the adjacent structures to the lower surface of the liver. Many times these adhesions do no harm, but not infrequently they are the source of very much discomfort. I have had no difficulty with them, however, for several years since I adopted the plan of pulling up a piece of omentum, tucking it down under the liver, fastening it in place by a single catgut stitch, and then closing my incision with the usual drainage wick leading down to the stump of the gall bladder. The omentum forms a yielding fatty buffer so that firm adhesions do not form and trouble is obviated.

#### MOIST VS. DRY SPONGES

(11) In visiting different hospitals I find that in a considerable number of them the operators are in the habit of using dry sponges and dry pads in the abdominal cavity. This is a serious mistake. The moist gauze does not adhere to the intestine and hence does not irritate its delicate covering, while a moist sponge wrung out as dry as a nurse can wring it is much more greedy in the absorption of fluids than the dry sponge, just as a moist blotter takes up ink more rapidly than a dry one. I have never seen any reason to believe that the use of the so-called normal saline is of any advantage over ordinary water.

#### DURATION OF OPERATION

(12) Any abdominal operation prolonged beyond about one hour is fraught with danger, not only because of the prolonged anaesthesia but because of the prolonged exposure of the peritoneum. So long as the operator keeps within this limit, is gentle in his manipulation and controls hemorrhage, any series of operations are easily within the line of safety; but if he goes beyond that point, no matter how simple the operation, there are inevitably inherent dangers. No surgeon who requires an hour and a half to two or three hours for an abdominal operation should be permitted to operate. There is a congenital defect somewhere, or a defect in his technique. Under ordinary circumstances a pan-hysterectomy, appendectomy, and cholecystectomy if necessary, can be readily made within an hour's time, with practically no hemorrhage and no shock.

115 S. GRANT AVE.

#### DISCUSSION

DR. RUFUS B. HALL (Cincinnati): Dr. Baldwin very kindly sent me a copy of his paper a few days ago, and I was impressed with the very great care with which he had gone over the different points and the technique, and I am convinced that all points taken up by the essayist are up to date in the modern technique of abdominal and gynecological surgery.

His paper impressed me with another thing that you gentlemen, who have the honor of know-



ing Dr. Baldwin know, that he is not only a very precise and exact writer, but he has what I call mechanical ingenuity equaled by few men, and when he says that he makes this multiple operation of hysterectomy, appendectomy and coelocystectomy all in the hour, we know he does it. I have seen him do it, and know that it is possible and probable that he rarely takes the hour for a major operation in the abdomen.

I have no fault to find with the technique of the Baldy operation for retroversion of the uterus, but I do object to the universal adoption of the operation because it fails of its purpose in not a few cases. I have had occasion to see several patients in which this operation had failed to keep the uterus forward, operated by our best surgeons. In two patients I have recently reoperated for the relief of pelvic pain with adherent retroverted uterus, both of whom had been operated by very distinguished surgeons for small ovarian tumor, and the uterus fixed forward by this method. Both patients were confirmed invalids since leaving the hospital following their operations. One for two years, the other two and a half years. They were young women 31 and 32 respectively, and it was very desirable to save the uterus and the remaining ovary, which was done in each case. After separating many and extensive adhesions, I was able to liberate the ligaments at the back of the uterus and utilize them in the method to be described and fix the uterus in the normal position. These patients were both relieved and are now enjoying good health.

In all cases of retroversion of the uterus in which it is desirable to correct that condition as a part of the operation, I have used a technique devised by myself many years ago. It utilizes the strongest portion of the round ligaments, and when the operation is completed it leaves the parts as nature intended. After the necessary surgery in the pelvis and abdomen is completed, the fascia at the lower end and on both sides of the incision, is exposed for about two inches; this is done by a few strokes of the knife and finished by wiping the exposed fascia clean by the aid of a little dry gauze. The abdominal incision is then retracted and the round ligaments are carefully picked up with ring forceps. A heavy silk ligature, about fifteen inches in length, threaded upon a dull pedicle needle, is then passed under one of the round ligaments, about two and a half inches from the uterus. The ends of this ligature are placed together and brought out through the abdominal incision and clamped in an artery forcep. The round ligament on the opposite side is now treated in a like manner. The retractors holding open the abdominal incision are now removed. The fascia at the lower end of the incision on one side is again exposed with the aid of a small retractor, which retracts the skin and superficial fat. The edge of the fascia on that side of the incision is grasped in a forcep at the desired point. The peritoneum on the same side is grasped by another forcep, directly under the forcep attached to the fascia. The fascia and the peritoneum are held taut in the hand of the operator by the aid of these forceps. With a narrow bladed knife a puncture is made through the fascia *only*, about one and a half inches from the median incision. An assistant makes traction on the silk ligature under the round ligament on the side of the patient under consideration. One of the operator's hands is inserted within the abdomen, making traction upon the silk ligature, no difficulty is experienced in locating the internal ring. The point of a curved pointed forcep is now

inserted through the puncture in the fascia and the forcep is glided over the muscles to the internal ring, which is easily recognized, by the fact that nothing intervenes between the end of the forcep and the fingers of the operator within the abdomen, but the peritoneum. With very little pressure the forcep is now forced directly through the internal ring and the peritoneum, and grasps the ends of the silk ligature in the jaws of the forcep. The assistant removes his forceps from the ends of the silk ligature. The round ligament doubles on itself as the operator withdraws the curved forcep holding the silk ligature, and is carried up through the peritoneum and the internal ring over the muscles and out through the puncture wound in the fascia. The operator then determines that the fundus of the uterus is in the desired position. He again introduces his hand into the abdomen and satisfies himself that the *outer portion* of the round ligament is entirely pulled out through the internal ring. A silk worm gut ligature is now passed through both folds of the round ligament, including a small bite of the fascia on either side of the ligament. The silk worm gut ligature is then carried through the fat and skin, directly over the point where the round ligament has been carried through the fascia and tied over a small pledget of gauze. The silk traction ligature is now removed from beneath the round ligament, thus leaving the folded portion of the round ligament on top of the fascia and underneath the skin and fat.

The round ligament on the opposite side is now treated in exactly the same manner. I have operated many hundreds of patients by this method, many of them have born one or more children. I have not seen a single patient with the uterus retroverted, after this operation.

In making hysterectomy, as in all operations in the abdomen, it is of very great importance, as emphasized by the writer, that all raw surface should be covered by peritoneum. In some of the old inflammatory cases this will tax the skill of the surgeon to the utmost, but it can usually be accomplished. In abdominal hysterectomy, if it is necessary to remove the cervix, the time of the operation can be greatly shortened and the technique greatly simplified by first cleansing the vagina and sterilizing it as well as the cervical canal and the uterus. After this detach the mucous membrane entirely around the cervix, separate the bladder from the uterus, but do not open the peritoneum at that point. Open the peritoneal cavity behind the uterus. This can all be accomplished in less time than it takes to tell it. A large piece of the sterilized gauze with one corner carried through the opening behind the uterus, and the remainder packed tightly into the vagina, leaving a corner of the gauze protruding from the vulva. While the operator is changing his gloves and his gown, the patient can be put in position for the remainder of the operation. The abdomen can be opened and the uterus removed. At this stage an assistant is to remove the gauze from the vagina without disturbing the patient. The removal of the cervix is a matter of a very few minutes, much more rapidly than by any method with which I am familiar.

DR. FRANK WARNER (Columbus): In the handling of retroversion, the Baldy method of shortening the round ligaments is a valuable one. While no method is always successful in correcting this condition, the Baldy method is probably as good as any. Dr. Baldwin's method of getting rid of a deep utero-vesical pocket is ingenious and valuable. His paper in its entirety



has been serviceable in giving us the benefit of his richness of experience in the operative field of abdominal surgery and calling our attention to the necessity of limiting the time of an operation to avoid an increased danger in the operative procedure.

DR. C. L. BONIFIELD (Cincinnati): Much that has been said I agree with absolutely. I especially want to emphasize one or two things that Dr. Baldwin said and that I have always taught. The first is that speed in operation in the abdomen is important. We have never had a world-renowned operator that didn't operate fast in the abdomen. The second is his use of the wet sponge. However, I believe if one goes around the country, he had better use the sponges dry than to run the risk of having them wet in water that is not sterile or having some one who has not sterile hands handle them.

But the part of the paper that I particularly want to discuss is that dealing with retroversion of the uterus. Now, how any one can conceive of a human being not having been produced by evolution, in other words, how any anatomist can think that our structure was made as it is, except as it was made for our ancestors who went on all fours, is past my understanding. Certainly the supports of the uterus were not intended in any way, shape or form for an upright position. Therefore, we frequently have to do something that is really not physiological to hold it in place. The structures that we most frequently use are the round ligaments, but the round ligaments were not intended to hold the uterus up. Their function was intended to pull it forward, probably intended mainly to act in cases of sudden emergency, but on account of their structure and location and various reasons, we must use those round ligaments as a means of support. Now, they are illy adapted to that. They are not by nature any too strong for the purpose. They are like a bridge that is built for a limited load, and we dare not put too much load on it. So that if we are going to use these ligaments for supports, it is of the utmost importance that they be allowed to perform their function as a support to the greatest mechanical advantage, and that is done by some form of the Gilliam operation, where the ligaments not only pull the uterus forward, but pull it upward.

DR. E. M. GILLIAM (Columbus): As the son of the originator of the Gilliam operation, I wish to champion that operation, for several reasons. One is, as Dr. Bonifield stated, the round ligaments, while they are not the supporters for the organ, do perform a considerable function when it comes to restoring that organ to its normal position.

I have found time after time, where I had to reopen the abdomen for some special cause, that these round ligaments became hypertrophied, so that they are at times the size of the little finger. We do not use the distal end of these ligaments to support the uterus or to bring it forward. We use the proximal end. There have been, I think, one or two cases on record, that is, supposed cases, where they claim that strangulation took place after the Gilliam operation. Now, I think the trouble was in the technique of the operator. If those ligaments are brought up through the abdominal wall sufficient distance on either side of the median line, it will leave a circumference so large that there can be no strangulation. Therefore, I question very much whether a strangulation has taken place where the operation has been performed as it should have been.

Another advantage about the operation is this,

that after the uterus has been placed in its position, and sustained there by means of these ligaments, that it does not interfere at all with child-birth following. The ligaments elongate and become hypertrophied with the elongation and increase in the size of the uterus, and after involution has taken place, these ligaments also contract and bring the uterus back to its normal position.

I have performed this operation for quite a number of years, and in fact this morning just came from the hospital where I performed the same operation in connection with some other work, and I have never as yet seen a ligament give way after it has been properly placed. In fact, in those cases where we have to enter the abdominal cavity for the purpose of removing a fibroid uterus, an operation that was required following a preceding operation of suspension of the womb, I have found that you could not take and pull those ligaments away from the abdominal wall—you could not sever them unless you used the knife or the scissors.

DR. J. G. BLOWER (Akron): I have nothing to discuss on Dr. Baldwin's paper. Anything that Dr. Baldwin does is all right with me always. I want to discuss the point brought out by Dr. Hall and to say I consider that operation nothing but a modification of Dr. Gilliam's operation.

DR. RUFUS HALL (Cincinnati): I don't claim anything else.

DR. BLOWER: There is one feature I want to bring out on that. I have done twenty-seven of these operations in the past year. My third operation tore loose on one side, and I had a lop-sided uterus. The point I want to bring out is the addition before the ligament is brought through of a couple of stitches to the ligament. The round ligament is sutured here, brought together, before it is brought through the canal, so that if there is a possibility of that side giving way, the round ligament has been shortened. I believe that has probably saved me some trouble in the future, the addition of two sutures to the ligament to tighten up that round ligament.

DR. L. G. BOWERS (Dayton): There is one point I wish to discuss and that is the disposition of the round ligament. The reason that there are so many methods of shortening of the round ligaments, indicates that no method is satisfactory in all conditions of displacement. I especially wish to call your attention to the method of shortening brought forward by Kelley-Cullen. This method consists of passing a needle threaded with linen through the internal ring under the fascia and over the muscle, picking up the ligament at several points to the cornea of uterus and return to point of entrance when the suture is drawn taut on each side and tied. A second suture catches the ligament at its uterine attachment and peritoneum at internal ring and tied. This latter suture covers over the raw surface and folded ligament made by the first suture. I have made such suspensions frequently in the last few years and have found on subsequent examinations that the uterus has stayed in place. Another point in favor of this method is that no raw surfaces are left for a formation of adhesions.

DR. HAINES (Cincinnati): I really think, gentlemen, that the paper of Dr. McCullough is well illustrated by Dr. Baldwin's paper following. The paper, "The Ideals in Surgery," should have been reserved probably for the discussion of his paper instead of what we said.



First, he turned back the deep structures, connective tissue, from the aponeurosis of the external oblique by sharp dissection. The average operator takes a piece of gauze, just why I do not know, and wipes it away. There is no place for tearing or wiping away things with gauze in surgery as long as you have a sharp knife at your command. Always do sharp dissections. Your wounds will heal more quickly and you do not traumatize adhesions so much. That is the first point.

There is one point relative to the doing of an appendectomy which I think will appeal to you at once when you consider the structures about the base of the appendix. It is in this region, next to the pylorus that we have the anodal tissue of heat most abundantly supplied, and the chronic symptoms of appendicitis are due, first, to the inability of the appendix to empty itself, resistance on the part of Gerlach's valve, and to a species of pyloral spasm occurring at the base of the appendix. Not infrequently men in their haste, or probably not thoughtful of this little anatomical point of which I speak, will leave probably a half inch, three-quarters of an inch or an inch of the appendix in doing an appendectomy. Do not do that, but if possible, go just a little beyond. Be very sure that you can demonstrate Gerlach's valve in your specimen that you remove, and you will not have any of the symptoms of chronic appendicitis continuing after doing an appendectomy.

The doctor spoke of pulling a piece of omentum over raw surfaces. This is a principle that I think we should always follow, especially in the upper right quadrant of the abdomen. I think it is particularly important to do this over the stump of the appendix. I believe it is equally important to have the little meso-appendix folded over it and held there, because this is nature's way of correcting a perforation. In a perforation of a stomach ulcer, duodenal ulcer, gall bladder, or appendix, you always find, if time has been available between perforation and operation, or if nature did her duty, there is a piece of omentum guarding this opening.

DR. BALDWIN: I hope you all recognize the fact that I did not write a paper on "Retroversion of the Uterus." I said in my article that when I had a case of that sort, I usually used the Baldy method of operation. I don't always do it by any means. The round ligaments do not act to hold the uterus up. If you will go out on the street where they are putting up a big building, you will see a derrick, an upright timber, a timber off here and a block and tackle connecting it. Four steel ropes go off from the top of that upright to keep the upright straight. They don't bring the stone up, but they hold that center of motion upright. Now, the round ligament simply will keep that uterus forward, while the broad ligaments give you the support. If you have a case of complete procidentia, you can't hold it up by simply shortening round ligaments by any method whatever. The object was, and no one mentioned it here, to bring out the point of getting rid of that deep pocket that you will find existing in front of the uterus. That is why the Gilliam operation still fails, why every other operation, I think, fails; there is a pocket there, the uterus is held forward, the intestines drop down, and little by little they push, push, push, until gradually the center of gravity of the uterus is back of the broad ligaments. It drops down backwards and you have a procidentia. I would like to discuss for an hour retroversion of the uterus, but that isn't germane.

Dr. Hall, in describing his method of hysterectomy by which he opens through the vagina first, describes an operation which I used to make years ago, and which for a while I thought quite satisfactory. I used to call it the "combined operation." In the technique which I now use, however, and which I described at the meeting of the Gynecological Association in Indianapolis several years ago, I avoid all work through the vagina but make a complete removal of the cervix with the body of the uterus. This method I have used now between two and three thousand times. In that technique the uterus is detached on each side, and the vagina exposed by ample dissection until it can be seized in front of the cervix with a hysterectomy clamp. It is cut across and the vagina opened. The incision in the vagina is continued around each side until the uterus is completely removed. The stumps of the broad ligaments and the round ligaments are then implanted in the open end of the vagina and the vagina closed by purse string. Those who have watched me make this operation I think will all agree that the removal of the cervix does not occupy more than one minute of additional time.

An interesting point was brought out in connection with the elongation of the round ligaments, in the remarks made by Dr. Gilliam. Although I have not seen one of these cases for a good while, we used to see them quite frequently when we operated on patients who had been subjected to the old Kelly operation for retroversion. In that operation the posterior surface of the uterus just below the fundus was caught to the anterior abdominal wall. In these cases after a while the point of adhesion became elongated and pulled out into a bit of tissue looking much like a rat's tail, the fundus of the uterus in the meantime having dropped back to the point where it was in the first place. These rat tails were sometimes four or five inches long and were of course a menace as to possible intestinal obstruction, while worthless as a means of support.

Dr. Gilliam spoke about opening the abdomen and shortening the ligaments when retroversion was found incidentally in connection with some other operation. That procedure, it seems to me, is a wise one. I was considerably amused some months ago when a patient consulted me who had been operated upon at a famous establishment in Michigan. The doctor in that institution had found a retroverted uterus with a small fibroid. He therefore made a median incision through which he removed the fibroid, and then closing that incision he proceeded to make an operation in each groin, an Alexander-Adams operation I suppose, to correct the retroversion. When the patient consulted me she had two post-operative fistulas, one in the groin and one in the median line. Why, in Heaven's name, the doctor did not do all the work through his first incision is to most of us, I think, a mystery.

I am glad Dr. Haines emphasized the point that is in my paper as to ligating down to the base of the appendix. If you leave a little bit of that appendix, you are very apt to have your symptoms of appendicitis and indigestion.

I want to say in passing that you will find it equally important to remove all of the fallopian tubes when operating for trouble at that point. Over and over again have I found that some preceding operator had removed pus tubes, but had left an inch or more of the tubes next the uterus, and the patient was having practically all of her old symptoms. The infected tubes should be taken out completely, taking out a wedge-shaped piece of the uterus at the horn so as to remove every bit of the tube. In closing the round liga-

ments can be pulled up around so as to cover this raw corner completely and thus guard against adhesions, at the same time that the ligament is shortened to hold the fundus forward.

I may state that of the cases that I have oper-

ated upon by the Baldy method, and that have later reported to me, I have had no failures. I do not use it in certain cases, but in the cases for which it is suited I have found the operation exceedingly satisfactory.

## Interesting Cases of Dislocation of the Crystalline Lens\*

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**Editor's Note.**—The study of congenital defects of the eye, as Dr. Clark points out, is of real importance and as cases of dislocation of the lens are extremely rare, it is equally important for ophthalmologists to make a careful study of every case of this character and place the data collected on record for the use of those who are equipped to work out the problem involved in its causation. So called spontaneous luxation is in its etiology, according to Dr. Clark, so intimately associated with coloboma of the lens and coloboma raises so many questions requiring for their solution the consideration of the diseases and accidents of foetal life that practical clinicians are prone to leave their consideration to the embryologists, who, in turn, owing to the relatively infrequent occurrence of such conditions, have little opportunity to study them. In his first paper Dr. Clark reports several interesting cases and in a subsequent paper, to be published in a succeeding issue, he goes into the subject of coloboma in more detail and traces its development generally and congenitally.

**L**UXATION or subluxation of the crystalline lens, whether its causes be traced to direct traumatism, to disease of the eye, or to a congenital defect in the zonula, always presents to the ophthalmic surgeon a problem that is worthy of his most careful consideration. So-called spontaneous luxation is in its etiology so intimately associated with coloboma of the lens, and coloboma raises so many questions requiring for their solution the consideration of the diseases and accidents of foetal life that we are prone as practical clinicians to leave them to the embryologist who, in turn, owing to the relatively infrequent occurrence of such conditions, has little opportunity to study them. The study of congenital defects of the eye is of real importance and if we are to do our bit in contributing to the advance of ophthalmology each of us should at least make a careful study of every case of this character passing through our hands and see to it that the facts are carefully placed on record for the use of those who are equipped to work out the problems involved.

That these cases of congenital coloboma and so-called spontaneous luxation are rare is evinced by the fact that in our own office practice, extending over a period of more than thirty-five years and including carefully indexed records of about forty-eight thousand patients of all kinds, we find only eleven cases of this class, four having sub-luxation† and seven coloboma, only one positively exhibiting both coloboma and subluxation; but how rich a field of rare cases sometimes falls to one individual is indicated by the fact that of

these eleven cases, seven are the descendants in two generations of one man.

### GROUPS OF DISLOCATIONS

I hope in a future contribution to put these cases of congenital defect on record, but in the present paper we are concerned only with the more practical clinical phases of dislocation of the lens whatever may be its cause. For our purposes we may group dislocations as follows:

(A) Subluxation in which the walls of the lenticular fossa are not broken down and the lens is only slipped partially out of its proper position by the stretching or breaking of a portion of the suspensory ligament.

(B) More complete luxation in which the vitreous is partly broken down or liquified but the lens is still held up by a portion of the suspensory ligament and prevented from falling onto the floor of the vitreous chamber.

(C) Complete dislocation in which the fluid vitreous allows the lens to drift about in the vitreous chamber or, under certain circumstances, to fall through the pupil into the anterior chamber.

While well marked disturbance of vision may result from any of these forms of luxation it is only in the latter form (C) that disaster to the eye is imminent, for while an eye may remain quiet for a long time with a clear, or even a cataractous lens on the floor of the vitreous chamber, sooner or later signs of irritation are apt to present themselves and only too often we have cyclitis with danger of sympathetic ophthalmia or an equally disastrous glaucoma.

### EXTRACTION OF LENS

In such cases the lens should be extracted before these symptoms become pronounced, or it may later be necessary to remove the eye and, while the extraction of such a lens may appear to the uninitiated as a simple affair and the operator sometimes is fortunate in obtaining a good result

†It should be noted that under the heading "subluxation," I have included only those cases in which the lens could be positively seen to be out of the lenticular fossa and have not so classified cases in which the only evidence was tremor of the iris or lens, as this tremor may be due to a lax suspensory ligament with fluid vitreous, or, when partial to coloboma of the lens.

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the 73rd annual meeting at Columbus, May 7, 1919.



by the employment of the ordinary methods, every operator of large experience will agree that such cases sometimes tax all his resourcefulness to the limit, and a guarded prognosis should always be given as, with a thoroughly fluid vitreous and a lens which floats about freely on changing position of the eye, it is not surprising that one sometimes is defeated in his best efforts at extraction. The operator must of course so maneuver as to get the lens into the anterior chamber and he will naturally try to keep it there by the instillation of eserine but this often fails and, if the lens falls back into the vitreous as he makes the section, a portion of the fluid vitreous is apt to escape and the eyeball in a measure collapses with the lens entirely out of reach.

Before operating each case should be subjected to careful study to determine, if possible, whether the walls of the lenticular fossa retain their form and consistency or whether the vitreous or at least its anterior portion is fluid.

If one is sure that the vitreous is reasonably firm, the ordinary procedure for extraction of cataract may be adopted; though one should hold himself in readiness on the one hand to resort to the use of the Critchett spoon or some similar instrument if the lens does not come away promptly, and must be prepared on the other hand to see the lens suddenly escape from the eye on the completion of the section and with it a considerable amount of vitreous.

In these cases, as in the Smith-Indian operation for extraction of the lens in its capsule, Colonel Smith's method or one of the modifications of his method of controlling the lids is almost imperatively called for, and, even with this, there are few more distressing situations for the ophthalmic surgeon than to find that after he has made his section that he has to deal with a partially collapsed eyeball with the lens he is seeking to remove floating at some unknown point in its depths. Enucleation is not an unusual fate of such eyes.

#### THE METHOD OF AGNEW

In considering the question of how one should choose between the various procedures which have been proposed for such cases, I am disposed, after trying a variety of other plans with varying degrees of success, to fall back upon the method of Agnew. The instrument introduced by Dr. Agnew is a small fork with two fine, sharp prongs about 5 m.m. apart, which is thrust into the eye transversely just behind the lens and, transfixing the ball, holds the lens well forward in the anterior chamber while the corneal section is made and the lens is extracted. This method has served me well in cases which I feel sure would have proven disastrous failures if any other plan had been adopted.

I confess that for some time I hesitated to resort to this plan of operation as it seemed to me almost too brutal a procedure to apply to so

delicate a structure as the eye, but its success in the case I shall describe will, I think, justify the statement that it is probably the one method that is applicable to the most unpromising cases and this is a fair test of an operative procedure.

#### CASE REPORT

Many years ago an Irishman presented himself at my clinic in St. Francis Hospital with the history of a blow on the eye, producing a dislocation of the crystalline lens which appeared sometimes in the anterior chamber and at others in the vitreous. The eye was somewhat irritable and the constant tendency of the lens to fall back deep into the vitreous chamber making the chance of successful delivery by the usual procedure very unpromising, decided me to use the Agnew bident which had served me well in another case.

I succeeded in getting the lens into the anterior chamber and placed the patient in an upright position in a reclining chair in the hope that I could retain it in that position. But, as the eye was sensitive (and this was before the days of cocaine) I was obliged to employ general anaesthesia. Our patient was an Irish alcoholic of the fighting type and proved to be an extremely difficult subject to manage. Indeed, in spite of all the ether and chloroform we could give him, while he became unconscious, he remained rigid, practically in the position of opisthotonos and of course the lens fell into the vitreous chamber, while the eye rolled well upward and remained in that position. We could turn him on his face and the lens would fall into the anterior chamber only to return to its former position in the vitreous when he was replaced in the sitting posture. The case seemed hopeless but I was determined not to be defeated until I had exhausted every resource at my command. Fortunately we had at hand a number of young doctors and students who came to my assistance. They were directed to lift the rigid body with face downward and feet high in the air while I, with a laryngeal head mirror on my forehead lay on my back on the floor directly beneath him. While in this position the lens fell into the anterior chamber and I managed to transfix the eye behind it with the Agnew bident and confine it there while they replaced him in the reclining chair and I made my section and extracted the lens. The obstinate rigidity of all his muscles still persisted, however, and his eyes remained rolled well upward and I was obliged, greatly against my will, to make my corneal section in the inferior segment. The case was certainly one to tax all of our resources but fortunately our efforts were rewarded by a good final result.

The cases of dislocation of the lens in which the lens seems never to fall into the depths of the vitreous chamber have, in my experience, generally yielded readily to ordinary extraction, though I confess I am sometimes tempted to use the bident even here, as it is often difficult to be

certain as to the condition of the vitreous and we can not make the pressure necessary to deliver the lens with any degree of confidence and, as I have already stated, one must be ready at any moment to employ the spoon to aid delivery.

#### CONGENITAL DISLOCATIONS

The two cases which I shall now describe have been of great interest to me as I have been able to follow them both through a series of years and thus to observe what takes place during a considerable period of the life history of congenital dislocation of the lens or, perhaps I should say, in congenital defect of the zonula. They represent the third and fourth generation in the family to which I have already referred in which either coloboma or dislocation of the lens was found in seven members of two generations of the descendants of one man, who was known to be blind apparently from cataract for ten years before he died.

I am satisfied that in both of these cases there was a congenital defect in the zonula, but in one

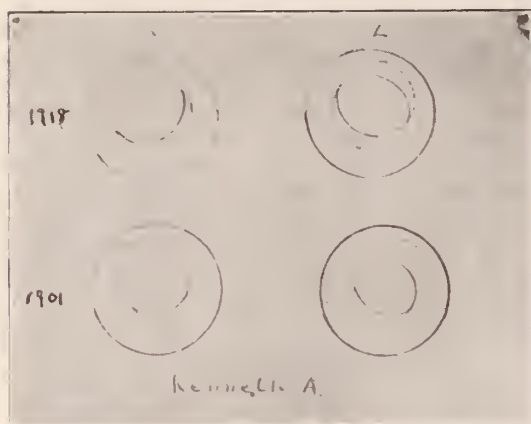


Figure 1. Case of Kenneth A.

the dislocation followed the classical direction upward and slightly outward, while in the other the displacement was directly downward. In the one in which the displacement was upward and outward the process was *spontaneous* while in the other, though there had been nearsightedness for years the dislocation seemed to have followed over-exertion. In both cases there was useful vision through the partially dislocated lens with a concave glass and through the aphakic portion of the pupil with a strong convex lens. In both cases the patients have seen well for years and been able to pursue occupations requiring good vision.

Kenneth A, a school boy of New Lexington, Ohio, at the age of 12 was brought to me on February 16, 1901, with the statement that he had trouble with his eyes from infancy. At about two years of age the discovery was made that the iris trembled. He had not complained greatly of pain in the eyes but had more or less fron-

tal headache followed by sick headache after use of the eyes in his school work. He had, however, attended school regularly and done well in his work since the age of six. For about five years he had worn for each eye -4.5 sph. for both distance and reading though for a few months he had discontinued their use. Only occasionally had the condition of the eyes prevented him for a short time from pursuing his studies.

On examination I found the corneae clear, the irides trembled on movement of the eyes and were slightly retracted in the inferior quadrant and bulged forward above by the pressure of the upper borders of the lenses which, on close inspection, were seen to be dislocated slightly upward, outward and forward in both eyes. The pupils were normal in appearance and responded actively to light. He seemed to depend more upon the left eye than the right but could use either. There was slight exotropia which he seemed to be able to overcome.

As I have already stated the patient had for the greater part of five years worn concave glasses, and with them was utilizing the central and upper portion of his pupil and crystalline lens. His vision unaided was: R,  $1\frac{1}{2}/60$ ; L,  $3/60$ . With the Javal ophthalmometer I found the corneal astigmatism: R, 2.25 D, axis 5; L. 2.25 D, axis  $20^\circ$ .

Utilizing his crystalline lens he accepted

R. -5.5 sph.  $\odot$ -1.50 cyl. axis  $5^\circ=5/40$

L. -6.5 sph.  $\odot$ -1.5 cyl. axis  $20^\circ=5/20$

I found, however, that with the pupil still undilated he could to great advantage make use of the lower aphakic portion of his pupil, his vision being thus greatly improved.

R. +14. sph.  $\odot$  +1.5 cyl. axis  $95^\circ=5/10$

L. +14. sph.  $\odot$  +1.5 cyl. axis  $110^\circ=5/10$

Allowing +10. D. for the correction of the normal emmetropic, aphakic eye, we find that, ignoring the interesting question of his corneal and lenticular astigmatism, (which latter may be due in part to the decentering and tilting forward of his lenses and their displacement upward and outward), he really had a hypermetropia of 4 D. in each eye, and when we consider the left eye, we see that the dislocated and probably more convex lens, released from the restraining influence of the suspensory ligament, and possibly in part by its anterior position, was accounting for a myopia of  $4 + 6.5=10.5$  diopters.

The lenses so far as they could be seen were transparent but he read better through the space below the lenses with

R +17. sph.  $\odot$  +1.5 cyl. axis  $95^\circ$  }  
=24/50

L 17. sph.  $\odot$  +1.50 cyl. axis  $110^\circ$  }

On dilating the pupils a much wider crescent shaped open space was seen below the lenses and one could clearly see the web-like remains of the suspensory ligament stretched upward and broken in places but attached partly to the anterior and partly to the posterior capsule of the



lens at its equatorial margin. In the left eye there was slight opacity of the posterior capsule at the periphery. The ophthalmoscope revealed an apparently normal fundus in each eye.

To me this case like that of his uncle, Mr. M. R. H. was doubly interesting owing to the fact that I have been able to see him from time to time for some seventeen years and note such changes as have taken place in eyes in which the lenses are partially dislocated. In January, 1903, the hyperopia had slightly decreased but the vision had improved to 5/9- in each eye. Six years later in March, 1909, when he was twenty years old his refraction was as follows:

R. +13. sph.  $\odot$  +2.5 axis  $95^\circ=5/6$

L. +12. sph.  $\odot$  +2.5 axis  $110^\circ=5/7.5$

At this time with the left eye with +18. sph.  $\odot$  +2.5 axis  $110^\circ$  he read D .37 at 21 c.m. and I found he had for some time had his glasses so constructed as to employ with marked comfort the right eye for distance and the left for reading.

Nine years later in May, 1918, seventeen years



Figure 2. Case of Mr. M. R. H.

after his first examination, his vision and refraction were found to be practically the same as above. The lenses were apparently slightly more displaced upward and outward and oblique illumination revealed slight opalescence.

#### THE CASE OF MR. M. R. H.

M. R. H. age 39, an undertaker and gardener of Portersville, Ohio, consulted me on July 21st, 1899, stating that he had had trouble with the right eye for some four years and with the left for twenty-four hours. He said he had always been *nearsighted*, but of late had double vision. His unaided vision was greatly reduced. With the right he counted fingers at 8 feet and with the left at 7 feet. The tension was normal and there was no irritation nor pain in the eyes but inspection revealed trembling of the iris and partial dislocation of the crystalline lens *downward* in both eyes, slight in the left but more marked in the right in which the upper margin

of the lens stood at the level of the horizontal meridian. The iris was unsupported above but bulged forward below. He was at first unable to satisfactorily account for the change in his eyes but on close questioning stated that in the right it had followed unusual exertion in lifting and in the left it had developed after pitching hay in the field and the confusion of vision was discovered on alighting from a wagon.

On dilating the pupils with homatropine they presented the appearance shown in the accompanying diagram.

He was wearing R. +2.25; Left +2. sph.  $\odot$  -8. cyl. axis  $180^\circ$ —vision evidently being obtained through the lens. With Javal's ophthalmometer the corneal astigmatism was found to be, Right 1.75 D. axis  $165^\circ$ . Left, 2 D. axis  $15^\circ$ . The astigmatism for which he wore the above correction being in the main lenticular and probably due to tilting of the lens.

I found that by utilizing the upper aphakic portion of the pupils his vision could be greatly improved by the following correction:

R. +15. sph.  $\odot$  +1.5 cyl. axis  $165^\circ=5/9$ —

L. +16. sph.  $\odot$  +1.5 cyl. axis  $15^\circ=5/15$ —

The lens of the left eye being mobile and yet retained within certain limits by the lenticular fossa, the iris and the remains of the slack suspensory ligament, I was able to make some observations which to me were very interesting.

#### SOME EXPERIMENTS

With the head inclined forward and the face in the horizontal position he could read D. 50 at about 20 c.m. (Experiment C.)

With the head in the same position but looking into a mirror set on his knees and inclined backward against his breast at an angle of  $45^\circ$  the left eye with -3. sph. -1.5 cyl axis  $165^\circ$  obtained vision of 5/15. On cautiously raising the head he could maintain the lens in this position even when the head was vertical, but the slightest motion caused it to again fall down into its old position. (Experiment A.)

With the patient prone on his back looking up into a mirror inclined at an angle of  $45^\circ$  he could look back over his head at the test card five meters away and obtain vision at 5/22.3—without the spectacle lenses. (Experiment B.)

In experiment A, with head inclined forward, may the lens not be presumed to have fallen slightly forward (though it did not escape through the pupil) and thus account in part for the myopia. While in experiment B, lying on his back, it falls again into the lenticular fossa restoring to a degree the moderate hypermetropia which we know to be the normal condition of the eye.

#### A CLINICAL FACT

A most important clinical fact seems to me to be established by these two cases: In an eye of normal size it is possible for a subluxated lens, whether the luxation be upward or downward, to

lie for years in the false position retaining to a great degree its transparency, and allowing excellent vision below or above it as the case may be, without causing symptoms of glaucoma or other serious disease of the eye. Slight atrophy of the iris is apt to develop at the point where the edge of the lens lies in contact with it, (this occurred in both eyes in the case of Mr. M. R. H.), and one must of course live in constant dread of complete dislocation into the aqueous or vitreous chamber with sooner or later the well known disastrous results if the lens is not promptly removed.

I have seen the patient last described, Mr. M. R. H. from time to time during a period of more than nineteen years and most useful and practically normal vision has been retained during that time. In 1903 it had improved to Right 5/6- and the left 5/5-. In April, 1919, he was still wearing, with entire satisfaction, the glasses given him sixteen years before, in 1903.

His vision was as follows:

27-70
Right 1/45; +18.50 sph. — 5/9 and
_____
1
Left 1.25/45; +18. sph. O +1. cyl. axis 15/—
5/7.5 and 21-70
_____
1

Mr. H. is an active business man who uses his eyes quite constantly and I found him to be a remarkable instance of stenopaedic vision in an aphakic eye in which distance vision and reading could both be accomplished in an entirely satisfactory manner with the same lenses.

The upper border of the crystalline lens could be seen at the lower margin of the pupil in each eye and the pupils were contracted to  $1\frac{1}{2}$  to 2 m.m. in diameter and slightly less curved on the inferior margins owing to partial atrophy of the fibers of the iris in the inferior quadrant. I could only explain the remarkable accommodative power of these aphakic eyes in a man of 59 years of age who with ease read D 1 at 21-70 c.m. (49 axis  $15^\circ$  could obtain distance vision of 5/7.5-), by resorting to the theory of the pinhole camera which, by excluding peripheral rays and utilizing only the axial or near axial rays is in focus for near and far points at the same time. In mentioning this man's case to our guest, Dr. Risley, he gave what is probably the most logical explanation of this apparent, or pseudo-accommodative power attributing it to the marked variations in the distance of the focal point of strong lenses when inclined at varying angles to the line of vision.

#### DISCUSSION

DR. CHARLES LUKENS, (Toledo): I hardly feel that I am qualified to discuss this paper. It has been wonderfully handled by Dr. Clark and I must congratulate him on his results in extract-

ing a crystalline lens from the vitreous, a maneuver in which I have miserably failed myself.

Speaking of the effect of this stenocoria, that is to be accounted for on seeing through a different part of the cornea. I have seen that in corneas, that you can refract almost anything and they will see. If you put a plus five cylinder or a plus two, or give them a minus correction, they will see with almost anything.

DR. F. G. STUEBER, (Lima): I was intensely interested in this paper, and probably would not have been so much interested but for the experience we have had in the last year with traumatic dislocation.

Of course, with congenital dislocation, some of the cases we have seen pass from one oculist to the next, and so on. The case in point was operated for senile cataract—if I may use that term—and the patient preferred to have it done in his own home and we yielded. It so happened that there was no electric light in the house on this occasion. The patient was somewhat rebellious and we got along nicely, until all of a sudden, to my great horror, the lens disappeared; and to make matters still worse, a storm came up and obscured the light. It happened that Dr. Bald, my assistant at the time, had with him a flash light, which we utilized very skillfully, and, with a wire loop we succeeded in extracting the lens and put in a little saline. I wouldn't have given much for the eye at that time, but the patient was in the office a week or two ago, and to my great surprise and delight, he has about 20 or 30, or better; he has about 11 or 12 with the cylinder 2 or  $2\frac{1}{2}$ , axis 15, I think.

That is the extent of my experience with dislocations. However, I only speak of it and denounce or condemn the method; I would not again extract a lens under such circumstances, though I think there was something wrong with it; it had probably undergone some structural changes which softened it and broke it.

DR. SAMUEL D. RISLEY, (Philadelphia): There are two things which have interested me for a long time very much. In the first place, I have been looking for many years for an opportunity to study, or have studied by some competent person, the histological conditions present, or to be found in a group of cases of which this is a part. For instance, an iritis in eyes, with coloboma of the iris, which is always, in every case I have seen, associated with coloboma of the cornea. Then, with these congenitally dislocated lenses, they all have seemed, as has been pointed out today in this group, to have a hereditary bias; and that is so with coloboma of the iris.

I remember many years ago a distant relative of my own married a very estimable lady—I refer to this detail to show that the heredity came from another line somewhere. He had good eyes; his wife had a coloboma of the iris on one side, below, with usually associated coloboma of the cornea. In due course of years a daughter came, with this same defect in the same way, in the same location, and I had the opportunity to study it.

Now some of you may have seen a few years ago the extraordinary group of cases of aniridia that I presented, a large number of them in four generations. What I am anxious for is to get hold of such eyes some time and study them histologically. There must be something in them, like a crooked nose or a deformed ear, like emmetropic eyes, or what not, which come down because of an anatomical variation, and in this case something which has disturbed the nutrition of the suspensory ligament of the invasion, and the nutrition being disturbed, you have the



notch there in the lens itself, or there being some lack of development embryologically in the suspensory ligament and the zone it was in, and what not in that location, it probably has as the underlying basis the absence of a blood vessel, or a group of blood vessels just at that time, which may account for the aniridial eye, or the congenital dislocation of the eyes, or the notched eye, and many other things.

I hope many of you may have the opportunity (which I have been unable so far to secure) of studying such an eye histologically.

There is another point which I thought might be of some value. I certainly like to hand my own experiences down, where they seem to be valuable. In the attempt to extract these lenses, everybody who has tried it doesn't look back to his experiences with very much gratification; but I have adopted a procedure in these difficult cases which has worked better than anything else in my own hands.

In the first place, I put in primarily a Kalt stitch and carry the loop of the stitch out of the way before attempting to make any sort of a section of the cornea. It is wonderful what confidence that stitch there will give you—you move forward as though you had a rearguard protection. I think these things all ought to be done under profound general anesthesia. Having made the section, I have constructed a sharp hook turned abruptly from the axis of the shaft and about two millimeters in depth, made very sharp. Now you can carry through the section you have made, the back of this hook, the shaft and the notal of the hook, into the anterior chamber in back of the pupil, where the lens is, and back of the lens, and then with your thumb and finger rotate it on its long axis until the hook gets where you want it behind the lens and it engages in the substance of the lens itself; so you use it as you would a tenaculum, rather than the idea of the vectis with the wire roof.

I have learned to look with horror at the introduction of instruments into the vitreous chamber. But you see this sort of an instrument, delicately made, introduced in that way, certainly makes a minimum of traumatism, and by rotating it in a number of instances I have been able to, with this tractor, or sharpel, slowly bring it out. On one occasion when I saw what I supposed to be—and that has been published, with some very beautiful illustrations of it—I saw this thing and I concluded that I would try to get rid of it by cutting a notch in it, puncturing it; but it floated before me like a child's balloon through the air. I then made a section and succeeded, by pressing upon the ball, so that it should be forced forward and held by a tense vitreous—although it was a fluid vitreous, as I discovered, I succeeded in grasping it with a pair of sharp hooked fine ivory forceps, I wrinkled it, like, and pulled it forward; also the section which I had made with a little pressure below with a spatula, and when it came, it was still fastened with a strand of suspensory ligament, which I cut off, and left a nice, round, clear pupil, with a great improvement in the vision. There is an illustration of that case, wherever it was published—I don't remember exactly where it was published—which shows how it appeared in and out of the eye.

DR. J. E. BROWN, (Columbus): I want to say a word on this very interesting resume of Dr. Clark's, which I think is very noteworthy because he summed up here an experience which is unusual.

Some twenty-two years' experience at the State School for the Blind brought under my no-

tice several cases of a congenital nature, and my recollection of those records is that the best vision of those cases in the school was 27 disk. In cases in which the dislocation has not been so marked, in cases I have seen in private practice, I have seen much better vision, but I have always been expecting to run across the cases where I would feel I must operate on these cases for visual purposes, and I have been expecting to do what I would call the classical operation for a congenital cataract. I would feel that I was giving the patient the better opportunity for good vision if I did that.

Now, if Dr. Clark's experience is to the contrary in that, I would like to hear a little something about that phase of the subject.

I had under observation this past year a child nine years of age of Catholic parents, whom I strongly advised to enter the School for the Blind, because the best vision obtained in that child, with a minus 9 diopter sphere combined with a two-cylinder at an axis nearly horizontal, was less than 22. However, for sentimental reasons, the parents refused.

That child was brought to me this winter with the lens of the right eye in bad shape and the anterior chamber of the right eye in a state of cyclitis, and there were other serious symptoms. With a rest in bed and by applying cold poultices, the eye slipped back and I extracted that lens a few days later under ether anesthesia. The lens having been dislocated downward, I found a remnant of the zonula below, so that as the lens very easily popped out through the section above, if it had not been for the Smith control of the lids, I would have had a very free escape of vitreous, but fortunately there was practically no loss of vitreous, but I have an iris in which there are a few points of anterior connectivum to the cornea above. Within two or three weeks that child has improved so that the inflammatory conditions have subsided, but the vitreous is still hazy and I cannot make out all of the details in the case, and so far as I could test this child, the vision is just about the same as it is in the unoperated eye. Now my expectation was to do in the other eye an excision and a linear extraction. Now, if I ought to attempt to extract that eye, I would like to know it.

The other thing about that vision is the distance and the near point from looking downward. The image is going to the macula both in distance and close vision, and don't we have a real change in the position of that lens in distance vision and in near vision; and if we don't have, how do we get that clearness of vision in the pin-hole vision, unless it is the closeness of vision?

THE CHAIRMAN: Is there any other discussion on this? If not, I want to say it is not easy to even perform an excision. I saw Dr. Weeks handle one or two of these cases very well, and he used a pair of old dilaceration needles. I saw one of his colleagues attempt to operate, and he chased the lens all around and was not able to penetrate it. Dr. Weeks transfixes with one needle and pushes with the other, and has adopted that as a routine method. Anybody who knows Dr. Weeks knows that he never adopts anything unless it is perfectly sound.

DR. CHARLES F. CLARK, (Columbus): This case, on one of these diagrams, represents just diagrammatically what I had in mind as to the possible position of those lenses; but that is one of the puzzles in these cases: how can a lens as large as it is, when you come to figure the size of the cornea and the eyeball and the normal lens,

how can a lens find room for itself in that eye by merely pressing the iris a little forward, without impinging upon the ciliary body, or some other portion of the scleral wall or the choroid? The conditions couldn't run for a period of fifteen years without causing any trouble—but they have not done so.

I feel like the small boy in school. When the teacher had gotten through with the explanation, she said, "Is there any question, or anything you want explained?" Nobody said a word for some time, but finally one little boy raised his hand and said, "Where do the figures go when you rub them out?" That is the way I feel about this: where does that lens go when it slips away, so as not to do any injury?

With the lens shown in that diagram, that position would cause trouble, it must cause pressure backward into the vitreous. In the case of this older man, who has now had this lens in

position for sixteen years, and it has remained in that same position all the time; he has had no symptoms of choroiditis, and yet he has a large lens, with his upper edge a little below the horizontal meridian of the eye.

The question that Dr. Brown raised is an important one, about the operative interference in these cases where the operative interference is called for. I don't know whether any one here would judge that I should operate in any of these cases. My own judgment would be to let them alone as long as they do well; but I have one instance of a dislocated lens where I attempted to do a needle operation, but unfortunately that one has not been determined. I was waiting to do the extraction, which I generally do within a few days after breaking up the lens, but the patient developed pneumonia, or some collateral trouble, and we had to postpone matters, but I expect later to be able to extract.

## Abdominal Hysterotomy\*

J. D. Smith, M. D., Akron

**Editor's Note.**—While abdominal hysterotomy has been labeled a very radical procedure, Dr. Smith holds that statistics do not bear out this verdict. With maternal or foetal dystocia the early performance will eliminate pain and suffering and the exposure to infection. It has many advantages over the use of high forceps and, taking into account the ease of approach, the rapidity of repair and the absence of complications, it should displace symphysiotomy and similar operations requiring separation of the bony pelvis. Abdominal hysterotomy has proven itself to be not only a life-saving procedure for the parturient woman, but a means of saving her from chronic invalidism and of protecting the child from the calamitous results of birth trauma. In this respect the operation is one redounding to the welfare of the community. Dr. Smith details the technique of the operation and gives complete statistics of the results in some 39 cases performed for various complications of labor.

**T**HE purpose of this discussion of abdominal hysterotomy is to correct impressions that seem current that this operation is only legitimately performed as a final effort in otherwise impossible deliveries.

It has been labeled a very radical procedure but statistics do not bear this out, unless they are gathered from the dusty past, which surgically speaking is not so very long ago. This discussion does not deal with normal obstetrics nor where the disproportion between babe and pelvis is not great, for hysterotomy is obviously bad if it does not reduce shock and trauma to a minimum. With maternal or foetal dystocia the early performance of hysterotomy will eliminate suffering, the exposure to infections, and a comparison with high forceps will be to the advantage of hysterotomy; with the ease of approach, the rapidity of repair and the absence of complications it has as it should have, displaced the use of symphysiotomy and similar operations requiring separation of the bony pelvis.

### UTILITY AND ADVANTAGES

Vaginal hysterotomy has a limited field of usefulness in cases where the bony canal is sufficiently large but an urgent delivery is delayed by a rigid cervix. The use of high forceps in con-

tracted pelvis is unscientific, unsurgical and mutilating and belongs to the past day when laparotomy was a dreaded procedure and reserved as a last resort. Where soft tissues are delaying delivery, forceps serve a useful purpose. The exploration of the uterine cavity by the vaginal route to determine the necessity for hysterectomy has proved a very practical measure.

The improvement in surgical technique has been particularly noticeable in abdominal surgery and in the reduction of tissue trauma hysterotomy has shared. The improved technique has lowered infant mortality and increased the mental and physical potentialities. It has eliminated destruction of pelvic floors in mothers and prevented the distressing symptoms that go with cystocele and rectocele. It has given a method of removing non-malignant growths on or within the uterus without destroying the opportunity for pregnancy and normal delivery.

The operation is accompanied by no greater risk of life nor as great risk of failure as those performed for severe lacerations and does not contain the danger of repeated miscarriage, the distress of irritating discharge or possibility of malignant degeneration associated with neglected tears.

Its early performance has reduced such sequelae of long continued labor as psychic and physical exhaustion; venous congestion and rupture of blood vessels, weakening of vessel walls

\*Read before the Surgical Section of the Ohio State Medical Association during the 73rd Annual Meeting at Columbus, May 6, 1919.



and later varicosity, separation of the recti and loss of muscle tone and flabby abdominal walls, injury to the bladder and rectum and pelvic floor and the dread of future pregnancy.

It has protected the child from the frequently occurring cerebral and meningeal hemorrhage which produce paralysis, epilepsy, phycic and neurotic disturbances and will prevent the loss of life that was so frequent between the pelvic inlet and the vulva.

The relation of birth trauma to the welfare of the community has not been given enough attention, yet the association of mental and psychic abnormality with foetal hemorrhage is becoming more apparent.

#### TECHNIQUE

Hysterotomy is a simple laparotomy with removal of babe and membranes from the incised uterus. Pituitrin,  $\frac{1}{2}$  to 1 c. c. should be given when ready for skin incision to improve muscular tone.

The abdominal incision should be longitudinal, slightly to the right or left of median line, retracting the edge of the rectus to take advantage of the posterior rectus sheath and to endeavor to place some muscular tissue between the layers of fascia. This has a distinct advantage in preserving the flexibility of the scar. The uterus may be opened in situ or delivered out of the abdomen. It adds to the cleanliness of the abdomen, if it is delivered and the uterus and abdominal contents protected with hot wet tapes and towels. With a keen knife and a gentle touch the uterus is opened in the mid-line posteriorly down to but not into the membranes inclining incision obliquely to right or left. If the membranes have not ruptured, the placenta should be loosened with the gloved hand and babe, placenta and membranes delivered without rupture until away from the field of operation. If this is done quickly there will be no respiratory attempts by the infant. If the water has escaped, delivery intact is valuable for infected material carried by examination or attempted forceps delivery will often be limited to the inside and lower aspect of the sac and its careful removal causes less contamination of uterine and peritoneal margins.

A change of gloves and renewal of the toilet of the field of operation should be made before proceeding with repair.

The uterus should be closed with three layers of chromic catgut sutures being careful to coapt accurately the mucus and peritoneal edges and to leave no open space between.

No drainage should be provided except the natural drainage from the dilated cervix and unless there has been no thinning down of the os, manual dilation is unnecessary.

#### AFTER CARE

The after treatment is the same as an ordinary laparotomy except that distension with gas is more frequent. Whether this is due to the change

in intra-abdominal pressure, or manipulation or other causes is not clear. There is a marked increase in this distension if opiates are unwisely administered and, if their use is persistent, the condition becomes distressing. Flushing the rectal tube and use of pituitrin or other nonstriated muscle contractor has been the most successful method of treating this condition.

#### STATISTICS

In this series I wish to report thirty-nine cases of abdominal hysterotomy performed for the following reasons:

	Cases
Contracted pelvis .....	24
Placenta praevia .....	4
Eclampsia .....	4
Exostoses .....	2
Tumor .....	2
Chorea .....	1
Hyperthyroidism .....	1
Anasarca .....	1
Operations prior to onset of labor.....	4
Operations after onset of labor.....	35
In labor less than 12 hours.....	5
In labor 12 to 24 hours.....	7
In labor 24 to 48 hours.....	16
In labor over 48 hours.....	7
Pelvic examination in.....	33
Forceps delivery attempted in.....	4
Patients having repeated hysterotomies.....	3

Results were as follows:

Maternal mortality, 1, anasarca.

This woman was so oedematous that examining fingers would not enter the vagina.

Foetal mortality .....	3
Placenta praevia .....	1
Chorea (premature) .....	1
Anascarca .....	1

Attitude towards future pregnancy:

Desirous of .....	9
Indifferent to .....	11
Not wishing .....	9
No expression .....	10
Patients rendered sterile by excising tubes.....	6
Eclampsia .....	3
Chorea hyperthyroidism and tumor, each.....	1
General anaesthesia .....	37
Local anaesthesia .....	2

#### CONCLUSIONS

Abdominal hysterotomy is a safe, scientific method of dealing with many uterine complications without interfering with the procreative functions of woman.

It saves pain and anguish, infant lives and maternal birth canals. It relieves the community of an increasing charge for the care and treatment of mental and physical and psychic abnormalities due to unwise or faulty obstetric supervision. It affords a satisfactory method of removing fibroid and other growths on or within the uterus. It permits the exploration of the cavity of the uterus during other abdominal operations.

It is attended by less dangerous sequels than difficult high forceps.

#### DISCUSSION

DR. C. L. BONIFIELD (Cincinnati): I was just thinking that hysterotomy is one of the most remarkable advances in surgery that we have any knowledge of.

Along in 1884, Robert B. Harris, of Philadelphia, published a paper in the *American Journal of Medical Sciences* in which he proved conclusively that hysterotomy as performed by the cow was much more successful than as performed by the surgeon. Present day records are certainly very different.

There is much to approve of in this paper, and I would just like to give one or two words of caution. The first is, as the operator intimated, that Caesarian Section is not a difficult operation. The technique is comparatively easy, and when the patient does get along well, the recovery is so nice, and the fact that the doctor thinks he has saved two lives makes him very cheerful. For that reason, there is a little tendency at the present time to deliver cases by Caesarian Section that a good obstetrician can deliver the other way.

Personally, I have never felt inclined to do a Caesarian Section until some one in whose obstetrical judgment I had the utmost confidence confirmed my opinion as to the necessity thereof, and I would urge that on others.

As to the hysterotomy for other conditions, I think that it is occasionally a good procedure, but it certainly is very rarely needed. I have been inclined always to believe that hysterotomy for diagnostic purposes was done more by those who had learned some of surgery first and gynecology afterwards than those of us who learned gynecology first and abdominal surgery afterwards. Those of us who had our training particularly in the work around the uterus and the vagina seldom find it necessary to resort to this procedure as a diagnostic measure. By careful palpation and by the skillful use of the curet, we are usually able to avoid this exploratory operation, and just as we more rarely resort to an explanatory operation in the abdomen, I feel that in future, we will still more rarely resort to an exploratory operation in the uterus.

DR. ROY MCKAY (Akron): In looking over the hospital records of the two hospitals of Akron for the past ten years, we find that fifty-two Caesarian Sections have been performed by eleven men. We find that the mortality rate in Caesarian Section in those fifty-two cases has been ten and two-fifths per cent. One thing that Dr. Bonifield emphasizes is the ease and simplicity of this operation as compared to an artful high forcep delivery. I think the thing that has led a great many men into hasty operating is the custom of applying the ordinary forceps and using ordinary strength, not making any more effort to manipulate than a great many of them do to manipulate a dislocated shoulder.

To my mind, the danger of Caesarian Section is greatly increased by the mere fact of the ease of the operation. I can't help but recall one case in which I had the unpleasantness of cleaning up a year later. I believe the writer insinuated the dangers of infection were not comparable to the dangers of infection from high forceps. This particular woman had a Caesarian Section and for some reason turned up infected. The operator had to drain her a few days later, and returned her to her home with a sinus. Later, she entered the other hospital where she was drained on charity service. She ultimately left that hos-

pital and drained for several months longer, and came back into the People's Hospital on my service still draining. It was absolutely beyond my ability to make a diagnosis of the condition existing in that abdomen. On opening the abdomen, I found the entire uterus, including the cervix adherent, the right tube infected, having ulcerated through the ileum, discharging into the gut, and the distal end discharging through the sinus.

In another instance I know of it was admitted that the man had no right to be doing abdominal surgery, for in making his incision through the uterine wall, he made an incision of equal length in the back requiring repair.

In looking over the history of Caesarian Section in Akron, only under one diagnostic condition was it evident that there was a pre-operative diagnosis. In no instance was there a pelvic measurement recorded. In no instance was there any evidence of the amount of pelvic deformity, if it existed.

DR. MAGNUS TATE (Cincinnati):—Caesarian section at the present day might be classed as a sort of a *furor* in surgery. A great many men are making Caesarian Sections who have absolutely no business doing so, and the reason for that is because they do not understand anything of the mechanical principles of obstetrics. The average, ordinary surgeon today knows nothing of obstetrics. The only thing he learned of obstetrics was when he was at school, and after that he refuses to attend obstetrical cases, but he is perfectly willing to make any kind of an operation on a woman.

A Caesarian section should not be made unless there is a special indication for its making. It is a mooted question today, and a very serious one, whether Caesarian section should be made in a case of eclampsia. Most of the noted obstetricians of this country and other countries condemn the making of Caesarian section for these cases. The same thing holds good for placenta praevia. A good obstetrician will save the mother and oftentimes the child, too, without making a Caesarian section.

The last speaker claimed a ten per cent. mortality rate. I claim the records of the hospitals in most of the cities in this country are almost fifty per cent., and I am not exaggerating when I say it. I have known case after case of Caesarian section where it has been made by men who had absolutely no business to go into that abdomen, men who have made Caesarian sections where they wouldn't do an appendectomy or a gall bladder operation.

The day is coming, gentlemen, when Caesarian section will be put upon the plane that it ought to be put. A case of this kind will be operated upon by a man who knows obstetrics. That is the only kind and class of men who should at any time operate on a case of Caesarian section. I say that feelingly because I know, and I realize only too well the way that cases have been operated on by the average, ordinary surgeon. I am not speaking of the surgeon who knows obstetrics, and who has had a good training in obstetrics. I am speaking of the man who doesn't know anything at all about pelvic surgery,—who couldn't tell a pelvic contraction if he saw it. The sooner we begin to realize that the man who makes Caesarian sections should be a man that is well trained, the better it will be for womankind.

DR. BALDWIN (Columbus):—I want to most heartily approve of the remarks that have been made during the discussion. I think that every hospital should have a rule that no Caesarian



section should be made within its walls until the necessity for the same has been pronounced by an obstetrician of recognized and wide experience. It ought to be an invariable rule.

Personally, as many of you know, I was a general practitioner for many years. I have carefully kept records of over a thousand obstetrical cases. I have sat all night and all day by the bedside. I think I know pretty well when a woman can be trusted to deliver herself. I think I know when the pelvis is contracted, when there are complications, but that is a thing that few surgeons can say that they have had, such a rich experience.

We have had, as the gentleman has said, a great many young men who have had no experience in obstetrics, perhaps not a single case, certainly not a dozen, who, because there is distortion, because there is delay, because there are convulsions, resort to a Caesarian section.

A very famous surgeon in Philadelphia some years ago made a Caesarian section for placenta praevia. He finally was pushed in the corner and had to admit that he didn't know how to make a Braxton Hicks, but he did know how to make a Caesarian section.

A year or two ago, I was told by a young surgeon, as we were washing our hands, that he had a Caesarian section. I said, "That is interesting," and I thought nothing about it. He added, "I think you know something about the case." I said, "Is that so? Then you must be referring to the case I saw an hour or two ago out at the Florence Strickland Home. Why, she has had one baby by herself. There is absolutely nothing wrong except a brow presentation. She doesn't need a Caesarian section. You could push that up, rotate a little and deliver in a few minutes."

He couldn't see it at all, and he challenged me to try it. The woman was already under an anesthetic. I resorted to the same procedure that Dr. Tate would have resorted to, or any other experienced man, and in a few minutes there was a squalling youngster, and the mother in fine condition, and they were both put into

an ambulance and sent home. It is so easy sometimes to make a Caesarian section, and it seems so difficult sometimes to deliver by the natural way, but the natural way is the better way.

DR. SMITH (Akron:—I thank the gentlemen for their remarks, and I heartily agree with them in saying that Caesarian section or hysterotomy should not be performed by an incompetent man, nor should it be performed on cases that have not been properly tried out. It is not fair, however, to an operative procedure to blame the operative procedure for the ill effects obtained by faulty technique. Many a good operation has been killed because people rush in without proper preparation, attempt to do operations without knowing how, and not only injure the patients but also injure the reputation of an operation.

Dr. Tate speaks of requiring special indications. I think every case should require very special indications, and I mentioned the fact that unless the hysterotomy would deliver a babe with less trauma, that it was obviously bad.

Dr. Baldwin, I think, loses the point of view that the ideal method of treating any condition is to produce the results with the minimum shock and the minimum trauma. I dare say that ninety per cent. of all women who have labor cases, if you let them alone long enough, will deliver themselves, but what is their condition after they deliver? And what is the condition of the babe? Now, it isn't a question of following nature or anything else. It is simply a question of surgery and surgical procedure, and the best surgery is the surgery that produces the result with the minimum trauma and the minimum shock. That is the only idea of presenting the paper, to endeavor to call attention to the fact that cases that can be delivered by Caesarian section with less shock and less trauma than by obstetric manipulation from below had better be done that way, and cases that can be delivered with less shock from below certainly should not have a Caesarian section.

## The Advantages of the More General Use of Local Anaesthesia in Surgical Work\*

H. T. Sutton, M. D., F. A. C. S., Zanesville

Editor's Note.—Dr. Sutton, after a satisfactory trial of local anaesthesia in his own major surgery, makes an earnest plea to those who have so far neglected this valuable form of anaesthesia, to take it up at once and guarantees that they will be immediately pleased with the results. Those who have had the pleasure of profiting at the expense of the mistakes which Dr. Sutton is accustomed to detail at the annual meetings for purposes of instruction, may rest assured that when he advocates anything it is something that has withstood a crucial test of every-day trial in the operating room or in the ward. Dr. Sutton has found in apothesine, a strictly American product, a local anaesthetic of sufficient potency and negligible toxicity to warrant its routine use in all operative procedure in which local anaesthesia is indicated.

**C**OCAINE alkaloid was discovered by Niemann in 1859, and its chemical constitution and physical properties were demonstrated and published at that time.

For some reason, which now seems to be absolutely unexplainable, the peculiar power of this alkaloid to produce local anaesthesia was not dis-

covered until twenty-five years later, and its announcement by Koller in 1884, marked an epoch in general surgery and dental practice.

The soluble salts of cocaine were so immensely superior to any anaesthetic substance that had hitherto been available to the dental profession that their adoption and use was immediate and universal. While any one and every one was able to quickly demonstrate the effectiveness of cocaine muriate as a local anaesthetic, it be-

\*Read before the Surgical Section of the Ohio State Medical Association during the 73rd Annual Meeting at Columbus, May 6, 1919.

gan to dawn upon practitioners that this powerful substance was also open to the serious criticism that it was also possessed of toxic properties which not infrequently led to most embarrassing situations, and in quite a number of instances, actually resulted in the death of the patient. After the lapse of several years, it also became a demonstrated fact that cocaine was characterized by a more subtle and dangerous characteristic and that was the fact that it was quite liable to induce a *drug habit which resulted* in a condition of the patient even worse than that which characterized the constant use of morphine salts.

#### COCAINE SUBSTITUTES

Having discovered such an effective and powerful local anaesthetic it was very natural that chemists should immediately have begun to attempt the production of some similar body which would possess all the virtues of cocaine and yet be free from its short-comings. It is impossible in so short an article as this, to review the tremendous amount of chemical work which was carried out in the course of the next ten or fifteen years, but it is of interest to note that in 1865, and long before it had been demonstrated that cocaine possessed anaesthetic properties, Lossin had proved that cocaine could be split into component parts or component chemical bodies, consisting of benzoic acid, methyl alcohol and a new chemical substance called ecgonin—quite complex in its constitution.

Having accomplished the analysis or the dissection of cocaine, it was very natural that chemists should then have attempted its synthetic or artificial production by chemical means. This was finally done and then it was demonstrated that cocaine was in chemical language—a methyl—benzoyl ester or ecgonin.

Having gained this much information as to the ultimate composition of the anaesthetic, chemists were able to make more rapid progress in seeking for a non-toxic cocaine, free from habit-forming tendencies.

In 1897, Einhorn and Heinz produced a new body which was chemically the methyl ester or para-amino-oxybenzoic acid and to which they gave the name orthoform. By making certain changes in the molecular structure of orthoform, they subsequently evolved nirvanin, holocain and acoin. In 1901 Ritsert produced still another anaesthetic which was the ethyl ester of para-amino-benzoic acid, to which was given the name *anesthesine*. In 1904 and 1905 Fourneau and Impene produced stovaine and alypin. In 1915 Einhorn, who had assiduously continued his experiment, announced the practical production of diethyl-amino-ethanol ester of para-amino-benzoic acid, which was called novocaine.

All of these several substitutes for cocaine above mentioned and several which we have not included, were hailed enthusiastically by dentists

and surgeons and all were put through a most thorough course of clinical testing—every one of course, hoping that the ideal local anaesthetic had finally been discovered. There is no doubt that material advances had been made with the passage of every year, but it is a serious question whether the ideal anaesthetic had as yet been produced. It will be noted that up to this time, practically all the experimentation with the idea of producing a synthetic anaesthetic, had been confined to European investigators, our American chemists for some reason, not seeming to have found this field particularly attractive.

#### APOTHESINE

Only within the last few years has sufficient interest been taken in the problem of developing a new and thoroughly satisfactory local anaesthetic of American manufacture to lead to the production of a substance that could be used confidently used, wherever any of the popular local anaesthetics of foreign origin had heretofore been employed and with the assurance of obtaining thoroughly satisfactory results. This product of American research and manufacture, known as Apothesine, has been the subject of critical investigation in all manner of clinical tests and has demonstrated its excellent anaesthetic activity as well as freedom from toxic or systemic effects.

Apothesine is a hydrochloride of gamma-diethyl-amino-propyl cinnamate. It differs from novocaine in that instead of being essentially an ethyl ester of benzoic acid, it is a propyl ester of cinnamic acid. It occurs as small white crystals having a melting point of 137 C. It is readily soluble in alcohol, partly soluble in acetone and ether, and very soluble in water. It is quite stable, will keep indefinitely if reasonably protected from contamination. The solution in water is neutral to litmus. It is precipitated from solution by contact with alkalis and the ordinary alkaloidal reagents. The solution may be sterilized in the usual manner, by heating to the boiling point of water.

#### PERSONAL EXPERIENCE

I regret that I cannot give accurately the number of cases which I have operated with local anaesthesia, but I do claim to have had sufficient experience to entitle me to speak upon the subject. My first major operation with local anaesthesia occurred eleven years ago upon a young woman who was recovering from a very critical illness due to typhoid fever, when suddenly she was attacked with acute appendicitis. Forty-eight hours after the beginning of the attack, I removed her appendix with cocaine, one-half of one per cent. solution, and although still in a state of profound exhaustion from her typhoid, she made perfect recovery.

Two years later, I opened wide the knee joint and trimmed the cartilage in a very fleshy woman of sixty years of age, whom we suspected might



have fatty degeneration of the heart. She was a patient of Dr. Postle, then of Toboso, now a prominent surgeon in Newark. She had not been able to bear any weight on her leg for over a year. We operated on her with cocaine and she made a satisfactory recovery.

A little later I operated on a woman of forty-five years of age whom I supposed had a walled off appendicital abscess and who was in an extreme state of prostration from infection and suffering. She was a patient of Dr. Denison then of Crooksville but now a prominent physician of Akron, Ohio. We used cocaine for the anaesthetic and I found instead of a walled off abscess, an elongated distended and necrotic gall-bladder filled with pus and stones. I removed the gall-bladder and put in a Mikulicz drain and she made a perfect recovery. From this time on until novocaine came into use, I only used local anaesthesia in opening abscesses and other minor operations. Four years ago I commenced to do herniotomies and during the past four years I have operated about fifty herniotomies with novocaine and apothesine and all were entirely satisfactory with the single exception of one frail young man from Lewisville, Ohio, a patient of Dr. Weber on whom I did both sides at one setting and he had quite considerable sloughing in each wound. It may have been due to faulty technique but I am inclined to believe that we overburdened his vitality by doing too much trauma at one sitting. In no other case of hernia have I seen the slightest degree of sloughing, nor have I had suppuration in any other clean case which I have ever operated with local anaesthesia.

Four years ago, I operated on a man with novocaine for Dr. Neave of Dresden, Ohio, who had been suffering from diabetes for several years. His urine was loaded with sugar at the time of the operation. He was fifty-eight years of age and forty pounds under his normal weight. His wound healed promptly and perfectly and when he left the hospital he said he had a feeling that he had been enjoying a house party the past two weeks. He suffered no pain at any stage of the game, is still living and free from hernia.

#### USE OF APOTHESINE

Two years ago when we were unable to obtain novocaine, my attention was called to apothesine with adrenaline and since then I have used it exclusively and I consider it an ideal local anaesthetic.

It is a matter of pride that it is absolutely an American product in every sense of the word. My first major operation with apothesine was on a man thirty years of age, a patient of Dr. A. R. Cain of Cambridge, Ohio. He refused to take ether. The operation was entirely satisfactory to all concerned and when the operation was completed, the patient insisted upon getting off the table and into bed without assistance, which privilege was granted him.

Soon after, I operated on a man of sixty years old for strangulated femoral hernia for Dr. Weinstein then of Summerfield, Ohio, now of Philadelphia. The man had a very weak heart and had to travel fifty-five miles over a narrow gauge railroad to Zanesville. The doctor was in great fear that he might not live until he reached the hospital. The operation was successful and the patient made a prompt and complete recovery.

#### TYPES OF CASES

I have operated on hemorrhoidal cases by the dozen (using clamp and cautery) not excepting the aggravated cases with prolapse of the rectum where a large portion of bowel had to be removed. I can stretch the sphincters to any degree without the slightest pain or discomfort. Suprapubic cystotomy is especially easy to do with local anaesthesia. I have done at least a half dozen cases. It is so easy and satisfactory that it is a shame to take the money for doing it.

Resection of the ribs for empyema can be satisfactorily executed with local anaesthesia. In most of those cases any other anaesthetic is a menace to life, especially ether, for it invariably starts a fit of coughing which is always alarming. I have done only two or three cases with local anaesthesia. I have opened the neck down to the deep fascia where there was an extensive infection extending from the mastoid down to the sternum, the infection being produced by mastoid disease. The patient did well.

I seldom do tonsillectomy, but I did one a short time ago on a young girl just to try out the apothesine. I injected the solution freely under both tonsils and was amazed at the manner in which it bulged the tonsils out into the pharynx. I picked one of them out in a jiffy and was chuckling with delight when she closed her mouth and refused to open it again for the removal of the other tonsil. So for the first and only time in which I have started out to operate with a local anaesthetic, I was obliged to give ether to get the other tonsil. She said afterward, she suffered no pain but was frightened.

I was in Woodsfield a few weeks ago in consultation over a case, and on my way to the train an old man ninety years of age, standing at his gate called my attention to an ugly cancerous growth on one of his ears, and wanted to know if I could remove it without putting him to sleep. I assured him that I could and he said "when" and I said "now." So I went into his house. I had a bottle of apothesine and a few small instruments in my handbag. I injected freely around the ear, cut the entire ear off with a pair of scissors, cauterized with a hot piece of gas pipe, the only implement available for the purpose to stop the hemorrhage, and left the old man enjoying a hearty laugh over what he considered a great joke, being minus one ear.

With apothesine I operated on a young man about a week ago for Dr. Shaw of Junction City,

Ohio, for acute appendicitis of forty-eight hours' standing. After the operation was over and the patient was being escorted to his room smiling, Dr. Shaw came into my dressing room and said "Beautiful, very beautiful, but there is one thing lacking in your technique that I consider very essential. You should have a victrola in the operating room. That boy should have been furnished some amusement, some entertainment while he was waiting for you to take out his appendix.

Apothesine is an ideal anaesthetic for doing vaginal hysterectomy and repair work on the cervix and perineum. One day last week, I operated on a woman for Dr. Hogue of Marietta, doing a vaginal hysterectomy and a perineorrhaphy. She was forty-five years of age, weighed one hundred and ninety pounds, had been having profuse periodical uterine hemorrhages for several months, the uterus was enlarged and the cervix greatly hypertrophied so that it seemed like malignancy might be causing the hemorrhage. The operation lasted a full hour. She only complained once and then very feebly, of discomfort, and she admitted after the operation was over that she suffered no pain but was frightened at the time she complained. Dr. Hogue said after the operation was finished that "he never could have believed it without seeing it." When I had completed my work, I asked her how she was feeling. She said all right only she would like to have something to eat: that she believed she could go to sleep if she had something in her stomach. The next day at 11 o'clock when I called to see her and inquired of her how she felt, she said, "Oh, I have some pain in my back, but I enjoyed my breakfast and kept it down."

The legs should be held by hands in the vaginal and rectal work, instead of swinging them up in stirrups. The loss of blood in vaginal work after using the local anaesthesia is almost nil.

I operated on two young men about the same age, for appendicitis a few weeks ago. The cases were as much alike as two cases could be. I gave one ether and the other apothesine and put them in a room together. The next morning the one who took ether said, "If I had known that I would be so sick, I would never have been operated on." The other patient said he felt so well that it was a shame to keep him in bed.

It seems to me that apothesine and novocaine have reached the ideal for local anaesthesia. I have done about an equal number of cases with each one, but I am inclined to give preference to apothesine. I have never seen any untoward effects from either, however.

#### AVAILABILITY

Of course, local anaesthesia can only be used in a certain selected class of cases, but they constitute a very large class, much larger than has been heretofore recognized by the rank and file of the profession. It is not likely that local anaesthesia is ever going to entirely displace general anaesthesia.

There is no doubt but that a local anaesthetic leaves nature more fit to fight where infection has invaded, more competent to repair damage done by trauma and disease, because there need be no fasting before operating and very little after the operation, because there is less shock, less loss of blood, no great strain on the circulation, no nausea, no vomiting and less interference with elimination than after being gassed with ether. There need be no fear in operating in the face of constitutional diseases such as nephritis, bronchitis, diabetes, arterio-sclerosis, organic heart disease or senility. Many lives may be saved and much suffering avoided by the more general use of local anaesthesia.

#### TECHNIQUE

For any kind of a major operation I have the nurse make up two ounces of three per cent. solution of apothesine with adrenaline. I have the patient given a hypodermatic of atropine 1/150 grain morphine, grains one-fourth to one-half, varying the dose to suit the needs of each patient, one-half hour before the hour set for the operation. I inject the skin for the length of the incision. Then I go an inch on either side of the line of the incision; inject the skin, always until the white line shows. Then I feel my way with a long needle into the deeper tissues injecting under the line of the incision; then on either side for an inch or perhaps slightly more. Then I wait ten minutes by the clock before making my incision, and I never have to use any more of the anaesthesia until I have reached the objective, be it the appendix, the gall bladder, the urinary bladder or what not. Always using a small short needle to start the skin and usually the short needle on the objective organ to be operated on. It is only necessary to bleb the peritoneum and meso-colon to painlessly attack the appendix.

In hernias I inject the neck of the sack. After injecting peritoneal or mucous surfaces you can immediately go ahead with your operative procedure. The bowels may be handled gently without pain even, when inflamed, if you are careful not to make traction on them. I have never observed any pain from sewing up the wound either in skin or deeper tissues.

In conclusion, I would plead with those doing surgical work, if they have not used local anaesthesia in doing major surgery, to take it up at once, and I guarantee that they will be immensely pleased with the results.

I shall not refer to spinal anaesthesia except to state that I am violently opposed to it.

*Streptococcus Bacterin (Special Bacterial Vaccine No. 10).*—A streptococcus vaccine (see New and Nonofficial Remedies, 1919, p. 291), marketed in 10-Cc. vials, each cubic centimeter containing 1,000 million killed Streptococcus. Fred I. Lackenbach, San Francisco.



# Differential Diagnosis of Tuberculosis and Syphilis \*

Theodore Zbinden, M. D., Toledo

**Editor's Note.**—When one considers the radically different treatment necessary in the care of tuberculosis and syphilitic patients, one can readily sympathize with Dr. Zbinden in his efforts to get the profession to differentiate between these conditions. The differential diagnosis is not so easy as both the clinical course and pathology of tuberculosis and syphilis show a very remarkable similarity, if we exclude the primary lesion. As Dr. Zbinden contends both diseases are chronic and may involve every organ and tissue of the human body. Both show a remarkable predilection for the lymphatic system. Either disease may cause disgusting open sores that result in serious and permanent deformities. Both are insidious and treacherous, the ever-present foes of human life and happiness. Dr. Zbinden discusses the differential pathology, clinical manifestation, physical signs, laboratory findings, and various other forms of differential examinations, and concludes that when the physician has studied his cases thoroughly along the mentioned lines and has interpreted the findings according to his good judgment and experience, there will be small chance for error.

**T**HE conditions which led me to present this apparently simple subject before you today are really deserving of great attention when one considers the radically different treatment necessary in the care of tuberculous and syphilitic patients. In the case of a negro who had been told he had advanced pulmonary tuberculosis and whose death certificate gave pulmonary hemorrhage as the cause of his demise, autopsy proved he really had an aortic aneurysm which had ruptured into the trachea. A man of 65, under treatment for nine years at our tuberculosis dispensary, was found to have syphilitic cirrhosis of both lungs. An apparently typical case of cervical lymph adenitis proved to be purely syphilis. An extensive tuberculosis of ankle and shoulder turned out to be syphilis.

These instances from the writer's own experience prove the vital importance of correct diagnosis and proper treatment. About 25 per cent. of cases coming to our tuberculosis dispensary and a fully equal percentage of any internist's private cases require considerable study to differentiate between tuberculosis and syphilis. When either disease is well established it can usually be recognized with ease and accuracy. Even then one ought always to be on his guard. Both diseases may be present, or the one may simulate the other to the minutest detail. But obscure cases, with their vague symptoms and signs, and often inconclusive or conflicting laboratory findings, will try an expert's ability.

## SIMILARITY OF SYMPTOMATOLOGY

The cause of the difficulty becomes apparent on a little reflection. The clinical course and pathology of tuberculosis and syphilis show a very remarkable similarity. If we exclude the primary lesion of syphilis, history of which is usually denied or unknown, we have in either case an almost identical train of symptoms. In its active form tuberculosis is no more prevalent than syphilis. Both diseases are chronic, extending over many years, and may involve every organ and tissue of the human body. Both show a remarkable pre-

dilection for the lymphatic system. Either disease may cause disgusting open sores that result in serious permanent deformities. Both are insidious and treacherous, the omnipresent foes of human life and happiness.

In their pathology tuberculosis and syphilis are so much alike as to be a rather frequent stumbling block for experts. Both diseases in the pure form tend to produce a lymphocytosis in the circulating blood. The diseased tissues show infiltration and multiplication of mononuclear cells. Giant cells may be formed in either case, although this statement needs further discussion. Extensive destruction of tissues is common and fibrosis usually attends healing.

The following statements must be taken only at their face value. They are based on personal observation in 410 cases seen at the local Thalian Tuberculosis Dispensary. These cases are much more apt to be tuberculosis than anything else, for obvious reasons. Twenty were positively found to have syphilis, five of these also having tuberculosis; 12 more are very likely syphilitic and a number of others probably have this disease.

To this series I have added 62 recent cases from private practice in which the differential diagnosis required special attention. Of the private cases 16, or 25 per cent. have syphilis; 18, or 28 per cent. have tuberculosis; 2 or 3 per cent. have both; 17, or 27 per cent. have neither disease, and 9, or 17 per cent. are still under consideration.

## DIFFERENTIAL PATHOLOGY

Every one must admit that giant cells are less frequent in syphilitic than in tuberculous tissues. Baumgarten, however, maintains that giant cells never occur in syphilis; if they are there, then both diseases are present. The necrotic tissue of syphilis is not liquefied as in tuberculosis, and the term caseous is more properly applied to the syphilitic than to the tuberculous tissue. A syphilitic lesion contains small blood and lymph vessels with apparently new endothelium; whether they really are new vessels has not been settled, but the endothelial cells resemble those of new-formed vessels. Also a peri-vascular infiltration takes place and leads to fibrosis with occlusion of ves-

\*Read before the Medical Section of the Ohio State Medical Association during the 73rd Annual Meeting, at Columbus, May 6, 1919.

sels. Whatever cell proliferation takes place in syphilis is of the fibroblastic type.

The tubercle is a distinct new structure composed of epithelioid cells, whose origin is still under dispute. The vascular involvement is not characteristic, and the fibrosis is quite frequently attended by calcification.

#### CLINICAL MANIFESTATIONS

Lack of time forbids mention of the valuable data obtained from history, etc. The toxins of *Spirocheta pallida* are less powerful if more insidious than those of the tubercle bacillus. A patient with a certain involvement of tissue by syphilis is usually not as sick as one having a like extent of tubercular disease. In accordance with this fact we find that 93 per cent. of our tuberculosis cases have a daily temperature range of 1.5 degrees or more. The cases of syphilis show the opposite condition; 95 per cent. show a normal temperature range of less than one degree. Of course, there are no cases of secondary syphilis in the series; at this stage fever will commonly be found.

#### PHYSICAL SIGNS

Naturally, a thorough physical examination will be conducted in each case; often repeated examinations will be required. The aim should be to correlate the phenomena with actual underlying pathology. Syphilis of the lung parenchyma is extremely uncommon. Therefore a lesion near the lung periphery producing changes in percussion tone, rather marked abnormalities in voice conduction and in the respiratory murmur, and especially if there are fine crackling rales, is almost certainly due to active tuberculosis. But a very active diffuse process may give no signs at all, or only very delicate rales heard with difficulty, but always beginning in one lobe of a single lung. The chronic fibroid tuberculosis which presents well marked physical signs is one-sided for a long time. Our one case of a syphilitic fibrosis involved both lungs extensively. Many of these cases, however, have merely an involvement of bronchial lymph glands, and their study by means of physical diagnosis is futile.

Examination of the heart may reveal evidence of value. The small, weak, perpendicular heart of tuberculosis is well known. Mitral stenosis practically excludes tuberculosis and usually is not due to syphilis. On the other hand, aortitis, aortic valve disease, aneurysm, with equal certainty point to syphilis. Arterio-sclerosis is not uncommon in tuberculosis, but the blood pressure is usually subnormal. Only one tuberculosis case had a high blood pressure 170:125, and that condition probably existed before tuberculosis became active.

One other valuable sign is the presence of large scars resulting after extensive necrosis of soft tissue and bone. Such a scar is almost pathognomonic of syphilis whether healing was spontaneous or followed medical treatment, self-admin-

istered or not. Healing of such extensive tuberculous disease is unlikely without the persistence of sinuses, or after surgical removal of considerable tissue.

#### LABORATORY FINDINGS

*Sputum:* Of all the laboratory tests the examination of sputum is the most simple and at the same time reliable. When it is positive the fact must be interpreted according to the other clinical phenomena. If cough persists, one negative finding should be followed by repeated examination.

Out of the series of 410 cases, 68 or 16 per cent. had positive sputa, and only one had no active tuberculosis. Of 116 cases with negative sputa 86 or 74 per cent. are known to have tuberculosis, and 28 or 24 per cent. have it in quite active, well established form. Of the 16 private tuberculosis cases 25 per cent. showed tubercle bacilli, and one had a negative sputum two weeks before death from extensive pulmonary tuberculosis. It is evident that a diagnosis of tuberculosis must be made in more than 75 per cent. of cases without aid from sputum findings.

*Tuberculin:* We value the various tuberculin tests quite highly. The Moro test ointment is the best in children up to five years of age. In older ones I consider the Von Pirquet better, probably because penetration into the deeper tissue is more certain. Of 118 Moro tests only six were negative, eight were doubtful and 102 were positive. In three cases the Moro was negative and the Von Pirquet positive. Of 51 Von Pirquet tests five were negative and six doubtful. No negative and only one doubtful case proved to have active tuberculosis. The value of the skin tests lies in the negative cases. About 90 per cent. give a positive Von Pirquet, but if a patient—young or old happens to give a negative result, he almost certainly has no tuberculosis. It is nevertheless wise to repeat the test if negative; the tuberculin itself may be poor, or the reaction may be delayed, especially in subjects where the resistance is low.

The hypodermic tuberculin test is very accurate but fraught with danger. For some time we made the initial dose two milligrams, but had two serious reactions in negroes, with marked extension of a quiescent process. Undoubtedly their lives have been shortened. Several marked reactions occurred in whites, who had sufficient native immunity to recover promptly and they even were benefited by the procedure. Two private cases of several months' duration, with cough, reacted strongly, but in a week's time were well and have remained cured after two years. This experience is in line with that of the early day of tuberculin therapy when some cases were cured by one or two doses.

The initial dose had better be 0.5 milligrams, the final dose 10 or 12 milligrams, and the interval ten days. The temperature must be taken three times a day after each dose, and an accurate knowledge of the daily temperature variation



previous to the test is indispensable. It will save many severe reactions if the physician will examine the seat of disease carefully on the day following each dose. A negative result is worthless unless the dose is carried up to 10 or 12 milligrams. A positive result means active tuberculosis, but requires further study to determine the extent of the disease. A negative result excludes tuberculosis with certainty.

*Wassermann Reaction:* This test is of immense value, and again has decided limitations. A lengthy discussion is not necessary here. The test ought to be a routine procedure, but certainly every case of known tuberculosis that does not follow the clinical course that could reasonably be expected of it, should have a Wassermann test, and if this is negative a further search for syphilis should be made. The converse is equally true. Every case of known syphilis that does not yield satisfactorily to specific treatment should be searched for tuberculosis. Again, a case of apparent tuberculosis that is not as sick as might be expected, should have a Wassermann test. You have all been told that a negative Wassermann does not exclude syphilis; that in such cases as we are discussing the reaction is positive in only two-thirds of those that actually have syphilis. You know also that a weak positive does not establish the presence of syphilis, and that further study will be needed to decide.

*X-Ray Examination:* A great aid in the diagnosis is an examination by a competent Roentgenologist. We would hardly care to continue the dispensary service without our much valued Harry Dachtler. The Roentgen ray will tell the extent of a lesion, its location, whether unilateral or bi-lateral, and the degree of activity. It will tell the type of process, whether soft or diffuse, or fibroid, or attended by calcification. If the lesion is entirely one-sided or mostly so, it is likely to be tuberculosis unless we have extreme rarity of a gumma. If it is small, sharply outlined or calcareous, it is inactive and unlikely to cause marked symptoms. If it has a hazy outline it is again more probably tuberculosis and active.

The study of lymph glands is difficult, because the heart interferes with those on its side. But a marked enlargement of the glands proper, with only slight inflammatory tissue about them, points to syphilis. An extensive bi-lateral lesion unattended by corresponding clinical manifestations, suggests syphilis. The X-ray has certain serious limitations, but even an uncertain report gives decided aid in diagnosis. Less than 10 per cent. give doubtful results, and the percentage of error is only 2 per cent.

*Therapeutic Test:* Usually after a case has been satisfactorily studied (and many cases remain undiagnosed because opportunity for complete study was not given) the diagnosis becomes apparent. It is satisfaction to prove one's accuracy still better by means of a therapeutic test.

But we find more limitations here than elsewhere. There is really no specific treatment for tuberculosis; theoretically tuberculin is specific, but in practice it has not that appearance. Rest, fresh air, proper exercise and diet will improve any patient's health, as it would that of his physician if he could have them.

We would have to use the remedies specific for syphilis. The iodides must be used with caution; used alone they do not help the syphilitic much, but they almost invariably aggravate pulmonary tuberculosis. Mercury is the best specific, but about 25 per cent. of people cannot take sufficient mercury to cure syphilis, while the anemia and gastro-intestinal disturbances might be very injurious to the victim of tuberculosis. Arsenic is an excellent tonic and has been used much to cure tuberculosis. It will do more good in syphilis than tuberculosis, yet the difference may not be established.

#### CONCLUSIONS

The distinction between tuberculosis and syphilis is a daily problem for every physician and often presents great difficulties. The two diseases are remarkably similar as to pathology and clinical course.

Syphilis produces milder symptoms than tuberculosis, but it is also more treacherous. It is rarely attended by fever, whereas the opposite is true of tuberculosis. Syphilis may destroy large portions of the body, yet often heals completely with the formation of large scars. Extensive tuberculosis is rarely arrested, unless surgical removal is possible.

Physical examination alone is not reliable. Examination for the tubercle bacillus is applicable in possibly one half the cases, and is conclusive in less than one-fourth. The skin tuberculin reactions are of value, but are conclusive only in the very young. In people past fifteen they are valuable only in 10 per cent. of cases. The hyperdomic test is difficult and dangerous, yet very accurate. The Wassermann reaction is really a necessity for proper diagnosis but discloses only two-thirds of the cases having syphilis. Roentgen-ray examination is of great value in the hands of an expert; it explains the phenomena observed by physical diagnosis, but gives much more information of value. The therapeutic test has decided limitations.

Finally, when the physician has studied his cases thoroughly along the lines above mentioned and interprets the findings according to his good judgment and experience, there will be a small chance of error.

COLTON BUILDING.

#### DISCUSSION

DR. CUMMER, (Cleveland): In regard to the results of the Wassermann tests in founding institutions, I might say that I think the present situation in regard to Wassermanns is extremely unsatisfactory. They are standardizing on this particular question but it is very hard for us to harmonize our figures.

There is a great deal of misunderstanding as

to just what a positive Wassermann reaction means. I think it will be to the benefit of the entire profession if this thing is standardized, all using the same sort of technique and the language will be uniform. At the present, we cannot deny that we have no way of absolutely saying that a positive reaction means syphilis.

DR. MARK (McConnelsville):—We have been attempting to take a Wassermann in all the tuberculosis cases that come to the State Sanatorium to date as to the differentiation between tuberculosis and syphilis. About one per cent. have shown a positive Wassermann. Some claim that thirty per cent. are really negative. In a letter from the State Board of Health, Dr. Freeman stated that it depends on conditions. They have sent back reports in which a negative was determined.

Reports vary and we have decided that it is better not to rely too much upon the Wassermann reaction in these cases.

In sputum analysis, the case may have tuberculosis bacilli and still have syphilis, and may have a negative Wassermann.

We have used the X-ray in checking up the greatest number of our cases, especially where the suspicion of tuberculosis is present. In the cases that have both, we usually find a typical lesion, sometimes a triangular shape of the fibrosis, and some suspicions that don't appear to be of a tubercular nature, and checking up with a positive Wassermann and the history, which is absent in the majority of cases when you look for the initial lesion, because we haven't been able to get but one that gave a positive history of infection and then not until we had received the positive Wassermann.

The Wassermann is not a positive test to differentiate between tuberculosis and syphilis. We must remember that cases may have both tuberculosis and syphilis. I think it is Dr. Fishburg who writes that a case with both tuberculosis and syphilis may get along better than without, that is, with tuberculosis alone.

While I was at Cincinnati at the branch hospital taking Wassermans, sixty per cent. gave a positive Wassermann and in the majority the prognosis was very poor. Fifty per cent. admitted died within the first few months. We never tried to check up very closely that positives had a history of syphilis.

DR. COLE, (Cleveland): I think there are two things that we have got to know in Wassermann reaction; that a negative does not have syphilis. The sooner we get this in mind and remember it, and examine our patients carefully, the better off we will be. We can't leave everything to the Wassermann reaction alone. There is such a thing as a positive where there is no syphilis. We all know that. I haven't seen that only a very few times. With leprosy, that is very common. At least in eighty per cent. you will get a positive Wassermann where there is no syphilis. We are finding now that with tuberculosis we frequently see a positive Wassermann where there is no syphilis. Moreover you have a tuberculous peritonitis, there it is similar. The doctor must be very careful with the conditions and use his clinical evidence and findings. With these and this history, we can give the patient a great deal of benefit. I think most workers have come to agree with the Noguchi system, you cannot be as sure as with the other. I do not feel with the drop method you will get as direct results. If the drop method is used, we cannot be exact.

DR. HINDMAN, (Columbus): There is one point that I wanted to bring out in regard to the bene-

fit to the general public in the general practitioner adopting the rapid method of examination for tuberculosis. It doesn't take a great length of time to do it, if you are accustomed to recognizing moist or crackling rales, chiefly moist. This can be done on every patient that comes to the office with very little time or trouble.

DR. UPDEGRAFF, (Cleveland): I want only a moment to speak from the viewpoint which I am very certain will be unpopular but I am going to uphold.

There is no use in asking men in general practice to spend time for these detailed and special examinations. They don't care to get the money in that particular way. It will be left undone. Of course, the group plan of a body of specialists to see everybody is quite right. Something approaching can be found in some one who is not especially equipped but whose trade is along those lines only.

My claim is, it is not fair to pass a patient around from one man to another—to send him to the stomach specialist, the nose specialist, or the eye specialist. Those things are entirely unnecessary. I want to leave the thought that there is a function for a survey of people who have been sick by one who knows the general diagnostic methods instead of passing them around to people who are unfamiliar with their past illnesses.

DR. RAMSEY, (Columbus): I should like to ask Dr. Zbinden if it has been his experience in pulmonary tuberculosis if excessive hemorrhage without physical signs may be on the syphilis side rather than on the tuberculosis side. I mean by that no rales or ordinary signs of tuberculosis but simply the hemorrhage occurring and no signs in the larynx or the mouth itself.

To show the complications that may arise, I happen to be director of the dispensary of the Children's Hospital and it is our wont to make routine examinations of all children. These children are placed out in homes that desire children. They want to know about them.

One question I would like to ask is how much value can be placed on Wassermans, whether negative or positive, on children under one year of age? The case I have in mind was one of a separated husband and wife. The husband was in New York and his wife here working to keep her child who was placed in our day nursery. The child was started on mercurial treatment. The mother was unsatisfied. She came to me and I had a Wassermann made which was negative. She wrote to her husband. He resented it very much and said that he had three different Wassermans made in New York City, all of which were negative.

I cite these instances only to get somewhere if we can on the question of the Wassermann reaction. It has been pretty well threshed out here and I think the more we go into it and get a general standardization of it, the better it will be.

DR. ZIEBOLD, (Shelby): With reference to the Wassermann, I do not know if the blood tests alone or the spinal fluid and blood tests should prevail? That is one question I would want to have answered. Recently in one of my cases blood examinations were made in Cleveland, and more recently the spinal fluid was examined in Columbus and Chicago and the verdict of it seemed that the case was one of syphilis.

DR. ZBINDEN, (Toledo): I don't know whether I should answer the question about the spinal fluid test. Of course, it happens quite frequently



that the blood Wassermann is negative and the spinal fluid shows the presence of cerebrospinal syphilis. I didn't mention it because it wasn't especially applicable in my paper.

The question about excessive hemorrhage: I don't know whether the doctor wants to put spe-

cial emphasis on the word excessive. In the dispensary none of the syphilitics had any hemorrhage but the number is too small, probably not more than forty a year. History of hemorrhage is quite common in tuberculosis.

## Psychiatric and Neurologic Symptoms Associated with Renal Signs\*

Louis Miller, M. D., Toledo

**Editor's Note.**—It has been a working hypothesis with Dr. Miller for a number of years that the psycho-neuroses do not exist where there is an active, manifest organic disorder. There appears to be an incompatibility between them and they rarely if ever coexist except when the organic disorder is latent. The renal origin of psychiatric and neurologic symptoms, running the gamut from nervousness to delirium and mania are not always frankly apparent and occasionally may be more or less masked by the nervous symptoms. Dr. Miller details some interesting and instructive cases showing how necessary it is to investigate renal conditions in the presence of focal infection, convulsions, temporary paralyses, local spasms, delusions, anxiety neurosis, and neuralgias. Dr. Miller insists that the practitioner should try to make his diagnosis of a psycho-neuroses on positive rather than on negative evidence.

**T**HOUGH all the pathology of nephritis is not thoroughly understood, it seems fairly well established that cerebral symptoms therefrom may be due to either concomitant high arterial pressure, to oedema or to retained toxins. The multiform symptoms possibly occur in all kinds of combinations. As Wells (*Chemical Pathology*) says, "in one case urea may be the chief factor, in another the action of urea may be complicated by the effects of acidosis, or high blood pressure *per se*, while in others cerebral oedema may be the chief influence. All possible shades of co-operating influence may be expected to occur when the kidneys fail, and to explain the confused, variable, changing picture of the uremic state."

### CLINICAL SYMPTOMS

Clinically, the following nervous symptoms are met with: Convulsions, temporary or permanent paralysis, tinnitus aurium, amaurosis, coma, local spasms, delirium, mania, pathologic ideas, headache, and vertigo. Since the renal origin may not be frankly apparent and more or less marked by the nervous symptoms, it is of practical importance to be aware of this possibility.

### CASE REPORTS

Convulsions may occur singly or periodically, thus suggesting epilepsy, of which the following case is an example:

June 22, 1912. Car inspector. Age 40. He came complaining of headaches, to which he had always been subject—suggesting migraine. In January he had a convulsion of the major epileptoid kind, and again in March. At times a brief sense of nausea and shortness of breath. The previous family and personal history was good.

**Physical Examination**—This disclosed a high arterial tension, cardiac hypertrophy, heaving impulse, and a double aortic murmur. Casts and

albumin were present at repeated examinations. Bromides do not give much satisfaction in such cases unless one can at the same time reduce the uremic poisoning.

Temporary paralysis, probably the result of local oedema of the brain, is sometimes seen, but if one gets this fact only from history he may too strongly suspicion hysteria and be thrown off his guard.

### LOCAL INFECTION

This patient was a man of 49 years who had experienced a tingling of the left arm and leg for two years. Then he developed a double vision due to paresis of the external rectus which had existed for ten days prior to examination. Physical tests elicited ataxia and past-pointing of the left hand. The blood pressure was 140-100. The urine was acid; specific gravity was 1024, and contained hyaline and granular casts, and a trace of albumin. The blood Wassermann was negative. The comparatively low blood pressure, apparently normal sized heart, and the high specific gravity of the urine and normal output casts doubt upon this being a case of true interstitial nephritis. The thought occurs that the considerable dentistry present may hide foci of infection which may be responsible for the symptoms. Other experiences tend to make plausible the hypothesis that focal infections do at times give rise to albuminuria, casts and other symptoms very like interstitial nephritis. Riesman, of Philadelphia, several years ago, reported a number of such cases.

### LOCAL SPASMS

Local spasms occasionally occur of which the following is illustrative, the case being remarkable for its persistence over weeks without other subjective disturbance.

The first symptom noticed by a laborer of 40 years of age was a twitching or rhythmical spasm of the left foot which persisted for many weeks without cessation, and for several weeks was the only thing he complained of. The heart was en-

\*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the 73rd Annual Meeting, at Columbus, May 7, 1919.

larged, the arterial tension very high and there were numerous casts and abundant albumin in the urine. Exitus occurred in about two months from the onset of symptoms.

#### DELUSIONS

Delusions of persecution may so closely resemble true paranoia that a differential diagnosis would be difficult without an internal examination.

This patient was a housewife, aged 63. Her most prominent symptoms were psychical, manifested by expressed ideas of neglect and enmity on the part of her neighbors. Indeed, the delusion of persecution stood so in the foreground that a diagnosis of paranoia previously had been made. But in addition there had been some vertigo, forgetfulness and irritability. The systolic blood pressure was 150 and the diastolic 80. Moderate oedema was present, and albumin. Arteriosclerosis was diagnosed.

Other patients gave a first impression of suffering from anxiety—neurosis and only the physical tests furnished the clue to the real condition.

#### ANXIETY-NEUROSIS

A middle aged lady began suffering from paroxysms of nameless fear, and sensations of shortness of breath. The picture resembled closely anxiety-hysteria, but physical examination and urinalysis disclosed the typical evidence of a chronic nephritis, which proved fatal within the year. An interesting instance of fear of organic origin was displayed in the case of a manufacturer, married, and 48 years old. His previous health had been good, and he had always been active and efficient in affairs. In February, 1919, he consulted me on account of his nervousness. Several months before he began to "feel nervous on walking." It had been his custom to walk from his house to the factory, but his fears on walking increased to such an extent that he ceased the practice and rode instead. He complained also of aching arms, palpitation and "flushing" of the head. These subjective symptoms were noticed only or particularly when he was introspective. He was "all right when interested in something else, or at the factory." Numbness of the fingers was in addition mentioned. The patient looked well and robust, and the prominent position given to the fear which was present mainly or only in correspondence with psychic associations, as when walking, but absent at his place of business, together with the paresthesia suggested first that a psychoneurotic disorder, with its phobias, afflicted him. Certainly the history, as related, by both the patient and his wife, resembled an anxiety neurosis. But the systolic blood pressure was 240 and the diastolic 118, with signs of cardiac enlargement, and urine of low specific gravity containing casts and albumin. Of course psycho-therapeutics in such a case is bound to fail. The nephritis proved fatal in a few months. In other instances there is not much emotional disorder, but an increas-

ing intellectual decline (dementia) may be the foremost symptom, as in the case of a housewife, whose age was 64 years. For one year members of the family noticed an increasing failure of memory, together with a general disinterestedness and apathy. Such was her mental state when examined in September, 1917. There had also been vertigo. The blood pressure was 225-137, the heart was enlarged, there was an aortic murmur, and casts and albumin were found. She lived but two months longer.

#### NEURALGIAS

One other patient had been afflicted with trifacial neuralgia for two years, which superficially considered might have been mistaken for tic douloureux. Where optic neuritis, headaches and vomiting form the symptom complex care should be taken to differentiate from tumor cerebri. Of this type I have records, as well as one in a litigation case. The patient claimed damages for a head injury sustained four years previously, but the symptoms undoubtedly were due to vasculo-renal disease. There are other diseases such as serous meningitis, cerebral arteriosclerosis, and so forth, the symptoms of which are so like those of uremia that only careful examination and consideration of the facts enable one to reach a correct decision. In some instances the phthalein test, and the nitrogen retention in the blood may be required. But ordinarily less elaborate tests are sufficient in so far as the neurologist's interests are concerned and to indicate in which domain pathological conditions exist.

On October 4th, this year, a man aged 58, and foreman in a factory, consulted me on account of a severe and obstinate brachial neuralgia which had embittered his life for three months and had resisted remedies and massage given for "neuritis." He complained of nothing aside of the constant pain down the arm. His previous health had always been good. His general appearance was that of health and robustness but somewhat overweight. However, physical examination discovered that this impression was delusive, for the heart was enlarged, with a heaving impulse, the blood pressure was 165-105, a murmur was present at the aortic cartilage, there existed a trace of albumin, while hyaline casts were numerous. The Wassermann test of the blood was negative. He was given, for quick relief, capsules containing morphine, phenacetin and aspirin, which proved very satisfactory. At the same time he started taking Niemeyers' pills (blue mass, digitalis and squills), in conjunction with a relative light protein diet, warm baths, woolen clothes (socks) and rest of the effected arm (carried in a sling for a time.) The capsules were later substituted by a morning dose of phosphate of soda. For nearly two months he has felt well excepting for an occasional little "growling" in the arm, which he has deemed practically negligible.

The data of the following case contain some



significance in the relationship bearing between focal infection and nervous and renal manifestations.

The patient, a gentleman 63 years old, the head of a large business, had been troubled for a year or more with almost a constant sense of "heaviness in the head," occasional vertigo and staggering had been experienced, and at one time "dim vision from hemorrhage." And he was subjected to phlebotomy for "high blood pressure."

He is a tall man about 6 feet, 2 inches, and weighed two or three years before 275 pounds, but had gradually lost until the present weight is 225. Part of this change was probably due to dieting and a good deal of walking (eight or nine miles a day.) He has been apprehensive concerning his health, with fear of high blood pressure. On October 31, 1919, the pressure was 170-100, the heart was negative, the urine was acid, specific gravity 1020, albumin, sugar and indican were absent, but there were 7 or 8 hyaline and granular casts on the slide, together with some cylindroids and a sprinkling of pus cells. Recalling Osler's "The Salutary Effects of a Few Casts, and a Little Albumin in Those Past Middle Life," I judged that the urinary findings did not indicate a kidney disorder of an extent or character to warrant the belief that the subjective symptoms were resultants. Arterio-sclerosis probably exists to some extent, but I have the impression that it is not the sole factor in producing the symptoms. There existed a good deal of bad dentistry, and a number of dead teeth, which the X-ray gave evidence of containing root abscesses. An expert dentist (Dr. Sherwood) stated pus was very evident in the gums, especially about the bridgework. All teeth were extracted in two operations. After three days the urine was absolutely negative; the centrifuged specimen containing practically no sediment, and no casts. No casts have reappeared since, but, a few pus cells were seen, the origin of which have not yet been determined. Subjectively there seems marked improvement, for the subject expresses himself as feeling better than for a long time. The suspicion might arise that the subjective improvement was owing to suggestion but I do not believe that suggestion, or the psycho-neuroses are at play at the age of 63, and especially in one who has been highly efficient throughout his previous life. It is probable arterio-sclerosis is the dominant factor in this case, and so the prognosis is not so favorable.

*I may add that it has been a working hypothesis with me for a dozen years, that the psycho-neuroses do not exist where there is an active, manifest organic disorder, i.e., organic disease giving subjective distress. There appears to be an incompatibility between the two classes of disorders. They rarely if ever coexist except when the organic is latent.*

#### PSYCHO-NEUROSIS

The practitioner should try to make the diagnosis of a psycho-neurosis on *positive* evidence, rather than by *negative*, as by exclusion. Having done so he should be reluctant on finding some physical signs to attribute the disorder to primarily physical pathology. For example one may find in a psychically nervous patient a cardiac murmur or albuminuria, but the heart may be functioning correctly and the albuminuria may be transient and innocent. If, however, a suggestion of heart disease is given to the patient as an explanation of the complaints it is probable he will be made worse by increasing his fears and introspection, and the task of undoing all this mental harm is very great. This applies to focal infection practice as well. I have repeatedly seen psycho-neurotic patients, and others who have had good and bad teeth removed without benefit. One woman who had pain in her "teeth" or "jaws," had had one or two good teeth removed every two or three weeks until a dozen had gone. She insisted against the advice of more than one dentist that they should be extracted. Later it was proved that the pain was hallucinated, and that it was of psychic origin.

Generally a psychic case can be diagnosed by *positive* evidence which is safer than the too prevalent plan of coming to a decision by exclusion—i. e. negative evidence.

450 SPITZER BLDG.

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*Arsenoven S. S. and Solution of Arsenic and Mercury not Accepted.*—The Council on Pharmacy and Chemistry reports that Arsenoven S. S., sold by the S. S. Products Co., Philadelphia, and Solution of Arsenic and Mercury (formerly called Arseno-Meth-Hyd) of the New York Intravenous Laboratory, New York, are inadmissible to New and Nonofficial Remedies because unwarranted therapeutic claims are made for them and because the names are not descriptive of the composition of these preparations. Arsenoven S. S. is claimed to contain dimethylarsenin 15.4 grains, mercury biniodid 1/10 grain, sodium iodid 1/2 grain. Dimethyl arsenin is asserted to be similar to sodium cacodylate, but with a more pronounced therapeutic action. Solution of Arsenic and Mercury comes in three dosages, 2 gm., 1.5 gm., and 0.7 gm., respectively. The 2 gm. form is claimed to contain 2 gm. (31 grains) of sodium dimethylarsenate (cacodylate), U. S. P., and mercury iodid 5 mg. (1/12 grain) in 5 c. c. of solution. Both preparations are advised for the treatment of syphilis, intravenously. The report of the Council reminds physicians that cacodylates have been found inefficient as spirocheticides and warns against the abuses—often dangerous—to which patients are frequently subjected when "intravenous therapy" is employed (Jour. A. M. A. Aug. 2, 1919, p. 353).

## The Comparative Anatomy of the Eye\*

Thomas M. Stewart, M. D., F. A. C. S., Cincinnati

**Editor's Note.**—There is a biological law, writes Dr. Stewart, that the various stages of development through which the individual passes typify the history of the race. It is not unusual then that in the human eye arrested development and pathological changes should be sometimes noted that closely simulate the normal type in lower orders. In view of this biologic fact Dr. Stewart believes that the comparative anatomy of the eye is an excellent preliminary to the study of ophthalmology. Apparently the degree of eye development depends upon the visual needs of the organisms as determined by their environment and the amount of light necessary in their existence. It would be interesting in view of the various types of eyes presented by Dr. Stewart to be able to see ourselves with the eyes of the dragon fly, the wooly worm, the snail, the brook-trout or the soaring eagle. In man what is seen depends more upon the mind and brain than upon the eyes. Besides man has mental resources peculiar to himself alone. He can see with a telescope and the ultra-microscope, and thus his visual power surpasses that of all other of nature's creatures.

**I**N comparatively low forms of animal life a similar eye structure is found as is characteristic of the human eye, and some of the slides will demonstrate the truth of this statement in the very small eye spots of worms.

There is a biological law, that, the various stages of development through which the individual passes typify the history of the race. In the human eye we sometimes note arrested development and pathological changes that closely simulate the normal type in lower orders.

Eels, fishes and snakes see through their eye lids as the skin of the head is continuous with the transparent cornea, just as in a six weeks embryo the lids are absent and later from the mesoblast covered with the epiblast develops the eyelids, and the lids adhere at their margins, only to separate at birth.

The degree of eye development depends upon the visual needs of the organism as determined

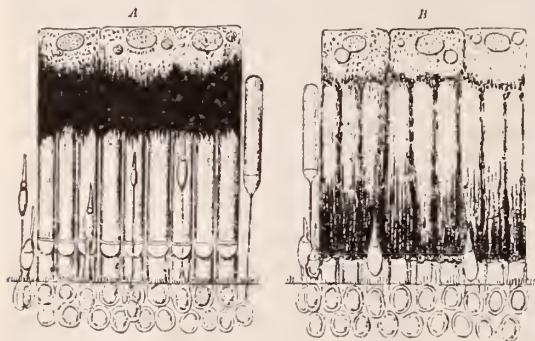


Figure 1—Pigment in human eye.

by its environment as to the amount of light necessary. Deep sea fish and worms have rudimentary eyes, others that live nearer the surface are provided with more elaborate visual organs.

### MIGRATION OF PIGMENT

In the eye pigment cells collect near the outer nucleated part of the rods and cones after prolonged rest of the eyes. Experimental work has

been done with frogs in which the retina has been studied after a prolonged stay in darkness, and conversely after an exposure to light. The migratory character of the pigment is nature's protection to the rods and cones, because before the exposure of light the pigment is collected within the outer nucleated part of the cells and the cones are greatly elongated. (Figure 1, A.)

After exposure to light the pigment has migrated nearly to the bases of the rods, and the cones have retracted almost to the outer limiting membrane. (Figure 1, B.)

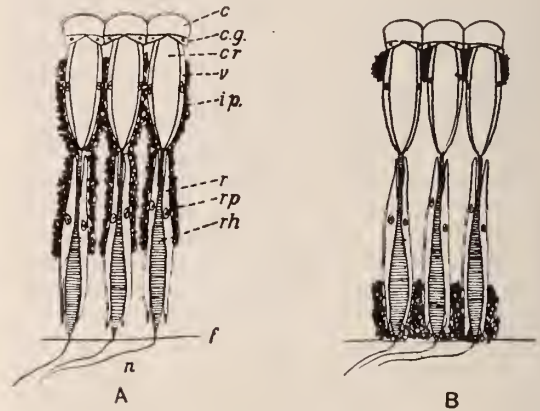


Figure 2—Pigment in compound eye.

In some of the crustaceans the same migratory character of pigment is noticeable. When the light is bright the pigment (1. p, or irido-pigment Figure 2 A.) covers the whole length of the eye, the light then enters through the cornea (c, Figure 2 A.) When the light is dull, additional light enters the eye by virtue of the fact that the pigment migrates or is rearranged as indicated in Figure 2, B.

In Figure 2, (c) indicates the corneal lens; (cg) the corneal cells; (cr) crystalline cone; (v) vitrella; (ip) irido-pigment; (r) retina; (rh) rhabdom or striated rod which is a sensory connection to nerve fibre; (rp) retinal pigment.

### LUMINOUS ORGANS

In other crustacean eyes lantern like structures provided with a lens allows of a phosphorescent

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association during the 73rd Annual Meeting at Columbus, May 7, 1919.



glow not only to attract, but to enable the creature to catch its prey as well. Figure 3 depicts the *euphasia pellucida*. The luminous organs (L) are shown along the abdominal segment.

#### COMPOUND EYES

The star-fish, the fly, beetle and other insects possess what are called compound eyes; this is because their heads are limited in motion, and the many corneal facets in semi-circular arrangement enable these creatures to receive images



Figure 3—Crustacean with eye spot.

from all directions, the corneal facets giving the clearest impressions indicate the direction of the object in relation to the insect.

In Figure 4, number 1 depicts the end ray of a young asteroid or starfish, (t) is the terminal tentacle, and (e) is the podia or eye spot. Number 2 is a cross section of the eye spot highly magnified, showing seven eye cups. Number 3 is in turn a cross section of an eye cup. As this eye cup is similar in structure to the eye of a worm it will be sufficient to refer to Figure 5, to note the conical cup form, in which the sides of the cup represent the retina (r). Hair like nucleated threads or a fringe (e) radiate from the retina and finally blend into a common fibre or optic nerve. The cup is filled with a gelatinous-like substance or vitreous (1) which also forms the

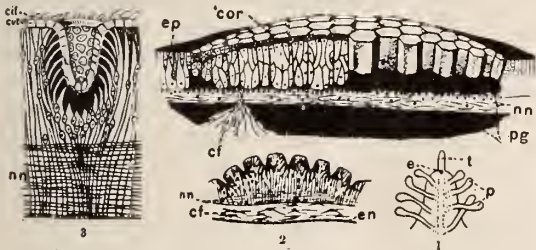


Figure 4—Compound eye of a starfish.

cornea (co). The cuticle (cu) continues right over this but is transparent and so forms an extra layer protecting the more delicate cornea.

#### THE EYES OF WORMS

All species of worms do not have eyes or eye spots. Figure 5 is the typical structure in those species that do have organs of vision. The eye of the worm consists of a pigmented cup, the opening into it is covered by the cuticle (cu) and the cornea (co) both transparent of course; a gelatinous mass of material (1) forming the lens and

answering for both an aqueous and vitreous humor; (r) nerve fibre rods connecting with the retina (e) composed of pigmented and nucleated nerve fibres.

#### COMPOUND EYES OF INSECTS

The compound eye of insects is a highly developed organ of special sense. Figure 6-A shows the detail of an insect's eye, verticle section. The surface is marked out into a number of hex-

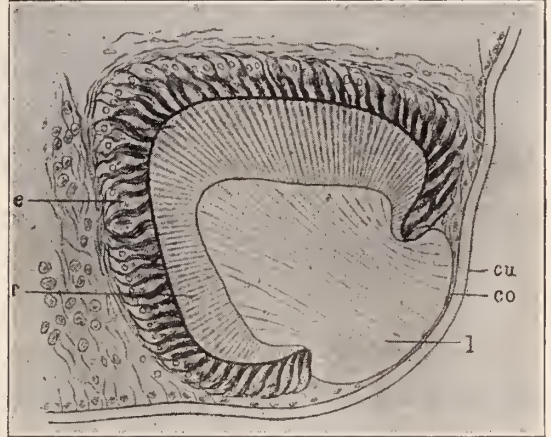


Figure 5—Eye of a worm.

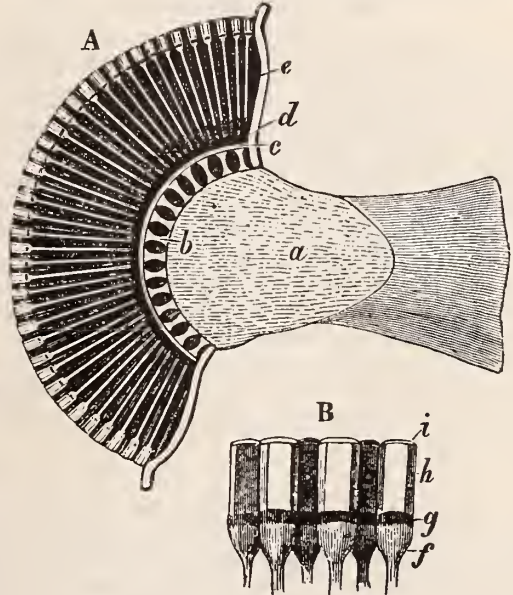


Figure 6—Compound eye of insects.

agonal facets, each of which is a small eye (ommatidia). In the dragon fly the facets number up in the thousands. Each ommatidia is composed of a cornea-lens (b), composed of an outer facet (i), a vitreous (h), a layer of pigment (g), and an optic nerve filament (f), these optic nerve filaments connect each cornea-lens or facet with a common retina of which (d) is the pigment layer, and (c) the general retina. In Figure 6-A there are shown a number of secondary nerves, (b) which finally unite to form the optic ganglion

(a). This ganglion is half as large as the mass of nervous matter or brain which is just above the oesophagus and called therefore the supraoesophageal mass of nervous matter.

The midge or buzz fly compound eyes are depicted in Figure 7. The smaller eyes are those of the female, the larger ones those of the male. Nature reverses the order of beauty and attractiveness when the human plane is reached, let it be noted in passing. In some insects the compound eye is divided into two parts, the upper

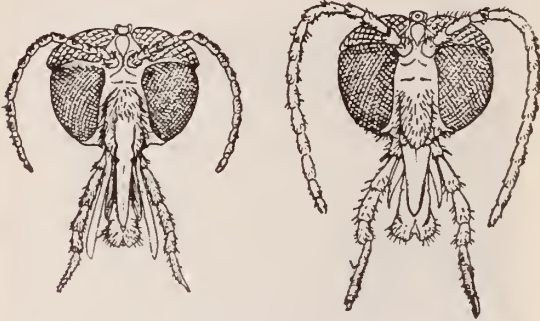


Figure 7—Female and male compound eyes of midge fly.

and more anterior part with fewer but larger facets than the lower and posterior part, well illustrated in Figure 7.

#### THE EYES OF THE SNAIL

The snail is a gasteropoda (moves on its belly) and because of the muscular outgrowth serving as a foot. From the head of the snail, when its body is out of its shell, four tentacula are to be seen. Besides being very sensitive organs of touch, the superior pair (c and b) are each equipped with a small, but perfect eye. When at rest or for protection the eyes may be retracted within the tentacle itself by the action of the retractor muscle (g). In which event the optic nerve shown fully extended at (f) becomes thrown into loose folds as at (h.) The brain is simply a mass of nerve tissue in ring-like form (l-m). The left superior tentacle (d) and its nerve and muscle (k) are extended. The right inferior tentacle (a) is retracted.

A highly magnified view of the snail's eye shows it to resemble the general structure of the worm's eye. A spherical hollow cup filled with a clear gelatinous mass which is at once cornea, lens and vitreous. The protective cuticle cells leave a gap at the apex or corneal centre which is the pupil. A retina and optic nerve complete this perfect, but not the highest in development, visual structure.

#### THE EYES OF FISHES

In fishes the water keeps the eye moist and no lids are needed. The lens (L) is an almost perfect sphere and more dense than in land animals. The greater sphericity and density are necessary because of the dense medium in which the fish lives. There is less difference between the densities of the water and the refractive media of the

fish's eye than between the air and the refractive media in the animal's eye.

Beside the absence of eye lids, there is an absence of the ciliary muscle. Fishes cannot accommodate the eyes for various distances by changing the shape of the lens for it is already spherical, therefore the fish's eye is passively ac-

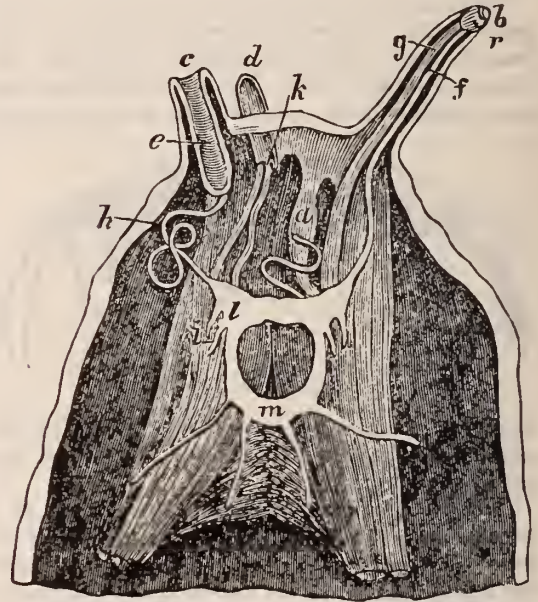


Figure 8—Head of a snail.



Figure 9—Snail's eye. The sclerotic (Sc) is extensively chondrified, and in some species is even ossified towards its junction with the cornea. The vitreous body (Cv) is small because of the extremely large lens.

#### THE EYE OF THE BIRD

The eye of the bird for the purposes of its life, is a most perfect visual organ. Means are provided through a third eye lid for protecting the eye ball from injury in combat, in flying among tree or bush branches, and in flying in the open sun light. A remarkable control over accommodation enables the bird to see its prey while flying high and to swoop down in order to seize its quarry and at the same time so accurately judge distances as to avoid striking the ground.

The flattened spherical shape presents a large posterior surface for retinal expansion. The cor-



nea is very convex, the lens large and highly developed, and the iris is very freely movable. The sclerotic is firm and also ossified near the cornea to aid in the accommodative efforts by making the eye ball rigid like a telescopic tube.

Springing from the optic nerve is a vascular structure called the pecten (comb-like) which like the falciform process of the fish aids in accommodation. When the pecten fills with blood it aids in pushing the lens forward, like elongating the tube of a telescope or microscope; the power-

as clearly; neither can he see at night as well as the horse driven in the good old days of country roads, dark nights and country doctors. But man has mental resources peculiar to him alone. He



Figure 10.—Fish's eye.

can aid the eye with the telescope at one time and the ultra-microscope at another, and so none of nature's creatures equal in visual power that of man, because of his greater cerebral development.

901 UNION TRUST BLDG.

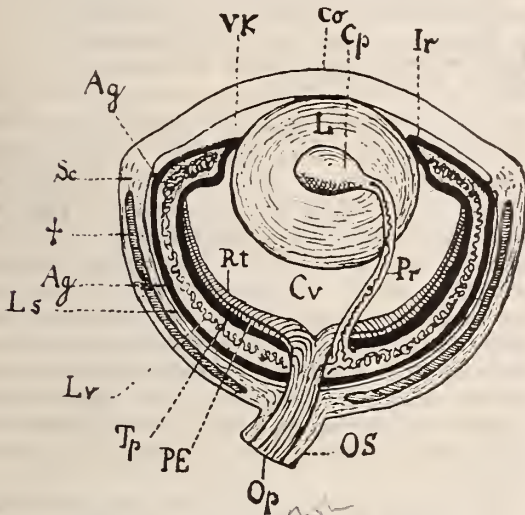


Figure 11.—Bird's eye.

ful ciliary muscles exert immense accommodative efforts because of the firm osseous reinforcement in the sclera in this region.

Like the eyes of the carnivora, birds have a layer of reflecting cells in the choroid at the posterior pole of the eye. This is called the tapetum lucidum (light carpet), animals and some birds see in the dark because the light passes through the retina and is reflected by the tapetum lucidum back through the retina a second time. This gives a double stimulation of the retina and hence better night vision. Likewise the glare noted when we look at the eyes of the animals at night.

#### SUMMARY

What is seen depends more upon the mind and brain than upon the eyes. We are automatically correcting "first glance" errors of vision and doing it so frequently that we fail to note this fact. Education enables one to work up the visual data into an elaborate conception, it may be a description of some beautiful scene or it may be a reproduction in color with light and shade tones conveying the artist's message to others. Again these same visual data may pass almost unnoticed by the lesser trained brain and mind. Thus we say "within the limits of their mental vision do all creatures see."

Man has not the keen discriminating seeing power of the eagle, he can neither see so far nor

*Staphylococcus Bacterin (Special Bacterial Vaccine No. 1).*—A staphylococcus vaccine (see New and Nonofficial Remedies, 1919, p. 289); marketed in 10-Cc. vials, each cubic centimeter containing 2,000 million killed *Staphylococcus albus*, 2,000 million killed *Staphylococcus aureus*, and 1,000 million killed *Staphylococcus citreus*. Fred I. Lackenbach, San Francisco.

*Typhoid Bacterin (Special Bacterial Vaccine No. 17).*—A typhoid vaccine (see New and Nonofficial Remedies, 1919, p. 292), marketed in 10-Cc. vials, each cubic centimeter containing 1,000 million killed *B. Typhosus*. Fred I. Lackenbach, San Francisco.

*Typhoid-Paratyphoid Bacterin (Special Bacterial Vaccine No. 13).*—A typhoid vaccine (see New and Nonofficial Remedies, 1919, p. 292), marketed in 10-Cc. vials, each cubic centimeter containing 1,000 million killed *B. Typhosus*, 750 million killed *B. Paratyphosus "A,"* and 750 million killed *B. Paratyphosus "B."* Fred I. Lackenbach, San Francisco.

*Tetanus Antitoxin—For Human Use: Purified, Concentrated (Globulin).*—A concentrated tetanus antitoxin (see New and Nonofficial Remedies, 1919, p. 266), marketed in syringes containing 1,500 and 5,000 units; in ampules containing 10,000 units, with apparatus for injection. Eli Lilly and Co., Indianapolis, Ind. (Jour. A. M. A., Aug. 30, 1919, p. 691).

# Trachoma, Its Diagnosis and Treatment

Robert Lockhart, M. D., Columbus

Chief of the Bureau of Trachoma Clinics, State Department of Health.

**Editor's Note.**—While trachoma is not an immediate menace in Ohio, still the survey of the State Department of Health, in several counties, shows that it is sufficiently prevalent to demand serious consideration by the profession-at-large. It is so easily spread in families and among the inmates of institutions that when it gets a start there is no telling how far it may spread and how difficult it may eventually be to control it. Also unless properly and persistently treated it may become chronic and lead to the loss of one or both eyes. The general practitioner should by all means familiarize himself with the differential diagnosis of this condition as elaborated by Dr. Lockhart. Superficial examinations of the conjunctiva do not suffice. The palpebral conjunctiva must be carefully inspected as well as the retrotarsal folds where the thickening and granulations and rough, uneven surface so characteristic of the disease are most apt to be discovered. It is also important for every one treating trachoma to master the grattage technique developed by Dr. McMullen for its rapid and complete cure in all stages.

## DEFINITION

IT IS difficult to discover a satisfactory definition of trachoma in the standard texts on ophthalmology. Probably the best is that of Roemer, who defines the disease as follows:

*"Trachoma is a wholly specific infectious disease of the human conjunctiva, the nature of which is to cause a chronic, inflammatory hypertrophy of the mucous membrane and to transform those parts it affects into cicatricial tissue."*

## COURSE, SYMPTOMS AND DIAGNOSIS

A typical case of trachoma may be described as follows: The victim has a narrowed lid aperture and a peering glance as if looking for a misplaced object. This is due to the drooping of the upper lid which is thickened and heavy as a result of its granular condition and the involvement of the small unstriped muscle of Mueller which lies just under the levator of the upper lid and is intimately connected to it. In other cases of trachoma, the upper lid does not droop although it may seem slightly thickened, while the lower lid has a characteristic look of heaviness and swelling. There is a slight mucopurulent discharge, evidenced by dried yellowish secretion at the roots of the eyelashes, and in not a few instances a marked blepharitis.

It should be remembered that trachoma affects the whole of the conjunctiva. In other words, trachoma affects the upper and lower lids and the mucous membranes of the eyeball. It almost always affects both eyes. The lower lids should be inspected first. The trained observer is often certain of the diagnosis of trachoma before he everts the upper lid, for the reason that the thickening, granulations, and rough, uneven appearance of the retrotarsal or transition folds are as characteristic of trachoma in the lower as in the upper lid. This leads to the observation which one often sees in the literature of trachoma, that the trachomatous process begins in the retrotarsal folds. It is usually further advanced in the upper than the lower retrotarsal folds. After the disease has lasted for a variable length of time in the fornices, the palpebral or

tarsal conjunctiva becomes involved and the granulations are seen scattered through this area in the form of yellowish white semi-transparent bodies which are apparently trying to push up through the mucous membrane. This they are unable to do on account of the intimate connection of the conjunctiva with the underlying tarsal cartilage. When the infection has lasted for a long time, these follicles finally succeed in penetrating the epithelial layer of the mucous membrane and then the tarsal conjunctiva will present a rough, uneven, granular appearance similar to that presented by the cul-de-sacs.

The cornea is usually not involved until this stage of the disease is reached. Then it is not uncommon to see a number of small blood vessels, taking their origin from the network of conjunctival vessels of the sclera, making their way across the corneo-scleral margin into the cornea itself. They pursue a straight course until they have advanced to within a short distance of the centre of the pupil, when they begin to interlace and form themselves into loops, marking the end of their journey. Frequently small superficial ulcers mark the course of these intruders. The favorite locations of these ulcerations are at the corneo-scleral margin and the termination of the vascular network in the cornea. This process of new vessel formation in the cornea always begins at the upper corneo-scleral margin, or in that part of the cornea which is hidden by the upper lid. In doubtful or border line cases, the presence of this beginning pannus is sufficient to warrant a diagnosis of trachoma, even though no ulceration has occurred and the blood vessels have gone only a short distance into the cornea. As the pathological process in the palpebral conjunctiva and transitional folds increases, the pannus may, or may not become aggravated. Probably in the majority of instances, the pannus does become more marked and thus seriously interferes with useful vision. Often the three remaining layers are involved, the integrity of the cornea is seriously damaged, the aqueous humor escapes, the iris prolapses, an opaque area of cornea remains adherent to



the subjacent iris, an anterior bulging of the coats of the eyeball or staphyloma, occurs, and as an end result, there is an unsightly, irritable eyeball practically useless for the purpose of vision and which eventually has to be removed, either to save the remaining eye from sympathetic irido-cyclitis, or to relieve its possessor of constant pain, or for cosmetic reasons. More frequently, however, the pannus clears as the trachoma of the lids abates and often, when it has not seriously affected Bowman's Membrane, it regenerates and the cornea again becomes entirely transparent. In many instances by the use of a biconvex lens of 13 to 16 diopters, throwing a pencil of sunlight or artificial light against the upper margin of the cornea and the corneo-scleral junction, there can be discovered several small, superficial, clear depressions indicating the presence of previous ulceration. Sometimes very narrow white opaque lines are noticed showing the location of the bloodvessels of an old pannus. By means of this same method, a beginning pannus may be found which would have been invisible to the naked eye.

There are some mild cases of trachoma which probably recover without treatment and without the formation of cicatrices. These are usually unrecognized. After the granulations have erupted through the epithelium of the conjunctiva of the lids and fornices, and have begun to coalesce, the stage of regression begins. Some of the follicles empty themselves of their pathological contents, or they are regenerated, while the thickened inflamed conjunctiva on and in which they lie, clears without the formation of the cicatrix. The majority of the follicles, however, rid themselves of their contents imperfectly, or not at all, and when they do, it is because of the mechanical pressure made upon them by the swollen papillae and the thickened connective tissue of the conjunctiva. This process continuing, often hastened by acute exacerbations due to the Koch-Weeks bacillus, or the Morax-Axenfeld or the Pneumococcus, gradually transforms the follicles and the diseased papillae surrounding them into cicatricial tissue. It is at the beginning of this stage of regression and cicatrization that the tarsal cartilages become involved, particularly the tarsus of the upper lid. The trachomatous process invading this tarsus to its greatest depths, aided by the constantly increasing cicatrization and contraction of the conjunctiva, soon changes the tarsus into an enormously thickened, deformed, boat-shaped swelling causing the upper lid to present an unsightly appearance and rendering it much more difficult to eradicate the disease by any method of treatment. It is the opinion of many observers that the exacerbations and remissions of this chronic long drawn out disease, correspond respectively to a reinfection, or a subsidence of the tarsal infection. The cicatricial stage continues for years until a large portion or

in some cases, all of the conjunctiva is transformed into a perfectly, smooth, white, glistening membrane devoid of bloodvessels.

#### DIFFERENTIAL DIAGNOSIS

There is one characteristic of a trachomatous eye which is quite significant; that it is always irritable. On everting the upper lid, the eye tears slightly and becomes bloodshot. On everting the lid a second time, the eye weeps and becomes more congested. Evert the lid for the third time and the eye waters copiously, the tears overflowing down the cheeks and the scleral conjunctiva exhibiting marked congestion, while the lid appears considerably more swollen than at the commencement of the examination. Often the tears are slightly blood-tinged.

There are a number of forms of conjunctivitis which may be confused with trachoma but the only variety which often causes any difficulty in the diagnosis is follicular conjunctivitis. The number of follicles, their size, and their location is of slight significance in the distinction which must be made between trachoma and follicular conjunctivitis. In the latter disease, the follicles lie on the mucous membrane and between them one may see the normal, unthickened elastic mucous membrane and its normal bloodvessels. In trachoma, the follicles lie on and in the conjunctiva and it is usually impossible by reason of the thickening of the mucous membrane, to make out its bloodvessels. When these vessels are seen, it is impossible to trace them through their normal course and they are widened and have a purplish congested appearance. In everting the upper lid with the fingers, if the case is trachoma, one experiences considerable difficulty in thoroughly turning it over while the tarsal cartilage has a peculiar, thickened, inelastic, resistant "feel", which is never experienced in an uncomplicated follicular conjunctivitis. It should be remembered that the trachoma granulations may and often do appear in two or more layers, the first layer consisting of large, well developed follicles, while the second, or third are composed of young developing follicles. It should also be recalled that trachoma follicles are not infrequently found in the scleral conjunctiva, within a few millimeters of the corneo-scleral junction. The *plica semilunaris* and the *caruncle* may also be trachomatous. The tear sac, lachrymo-nasal duct, and the inferior turbinate body of the nose, have been known to be affected by trachoma. It is almost needless to say that these structures just enumerated are never involved in follicular conjunctivitis. It is the cases of the latter disease which are complicated by an acute mucopurulent infection which are the most difficult to distinguish from trachoma. This can readily be understood when we realize that the acute process causes a pronounced thickening of the palpebral conjunctiva and the retrotarsal folds, practically obscuring the normal bloodvessels of

the conjunctiva, while the original disease furnishes the follicles, thus giving a complete picture of an active incipient trachoma. Often the history of a contagious epidemic ophthalmia in the community will clear up the diagnosis. Again, the instilling of a drop of adrenalin solution by revealing the normal conjunctival bloodvessels will demonstrate the absence of trachoma. In a considerable number of such cases, however, a positive diagnosis cannot and should not be made but they should be classed as suspicious trachoma. The lapse of a week or ten days will usually be sufficient for the acute process to subside and thus to establish a diagnosis of follicular conjunctivitis, or the thickening and granulations becoming more marked, the presence of trachoma is proved.

Vernal catarrh may be confused with trachoma, but the large flat granulations of the former disease, affecting only the tarsal conjunctiva and the corneo-scleral margin, do not resemble the trachoma follicles. The other type of this disease in which the follicles are not flat, but are rounded and oval shaped like the trachoma follicles, presents more difficulties but these soon disappear when one remembers that vernal catarrh does not affect the retrotarsal folds and never has corneal complications. The history so characteristic of vernal catarrh, that there is only discomfort and asthenopia during the spring and summer months which disappears with the advent of colder weather, also differentiates it from trachoma.

Gonorrheal ophthalmia may be differentiated from the papillary type of trachoma, by the greater abundance of the mucopurulent discharge, by the history of the attack and by the finding of gonococci in the secretion.

In conclusion, it may be stated that more mistakes are made in the diagnosis of trachoma from an incomplete, superficial examination of the conjunctiva than from any other cause. In every examination not only should the palpebral conjunctiva be carefully inspected but the retrotarsal folds must also be thoroughly exposed and examined. If this latter step is not taken a beginning trachoma may be overlooked. Often the pathological changes in the tarsal conjunctiva are too slight to warrant a diagnosis of trachoma, whereas if either the upper or lower retrotarsal folds had been brought into view, the thickening and granulations and rough, uneven surface so characteristic of the disease would have been discovered.

#### THE EXAMINATION OF THE CONJUNCTIVA

Before everting the lids the appearance of the eyes and eyelids should be carefully noted. First, it must be seen whether either of the palpebral apertures is narrowed and if there is any inflammation of the free margins of the lids. Then, any swelling of the substance of the lids, or any part of them, should be observed. In the third

place any injection of the conjunctival bloodvessels, the condition of the *plica semilunaris* and the *caruncle* as well as the transparency of the cornea ought to be determined. Any inequality or peculiarity in the shape of the pupils must also be seen. After these structures have been examined, the lower lids should be everted and the retrotarsal folds carefully inspected. After the patient has been directed to look up, press the skin of the lid against the infraorbital ridge and then with gentle rotatory motions expose in turn every portion of the lower cul-de-sac. After the patient has been ordered to look down, the eyelashes of the upper lid should be grasped at about their centre between the thumb and forefinger of the left hand and the whole lid gently pulled a short distance from the eye, while the first finger of the right hand makes gentle downward pressure at the upper convex edge of the tarsal cartilage. These two manoeuvres are continued for a moment and the upper lid is everted and the tarsal conjunctiva comes into view. This method of using the first finger of the right hand behind the tarsus is very good if one only cares to determine the condition of the palpebral conjunctiva and the tarsal cartilage. But in examining an eye to determine whether or not it is trachomatous it is necessary that the retrotarsal fold be carefully inspected. In place of the finger many objects have been recommended which serve the purpose fairly well. *The best thing, however, with which to evert the upper lid is the old fashioned glove buttoner. Its oval shape and the size and inclination of the oval, make it ideal for slipping in behind the tarsus and by making gentle downward pressure exposing every portion of the fornix. The glove buttoner has been used for years by Surgeon John McMullen, U. S. Public Health Service, in the examination of school children and other groups.*

#### TRANSMISSION

Trachoma is a contagious disease spread by direct and indirect contact. The specific virus is contained in the mucopurulent discharge so frequently associated with the disease. The more abundant the discharge, the greater is the danger of infection. It may be conveyed directly from a trachomatous eye to a normal eye. There are cases on record of nurses and physicians while examining a victim of trachoma, receiving a bit of the infectious discharge into their own eyes and developing a trachoma. It is always well when examining for trachoma to wear a pair of glasses as a protection against infection. The hands should be cleansed in bichloride or alcohol after each examination. The family wash basin, the roller towel, soiled bed linen, other people's handkerchiefs and napkins, in short the practice of almost any method of faulty personal hygiene may lead to contracting trachoma by indirect contact. Sunlight kills the



trachoma virus very quickly. It should also be said that the disease develops slowly and insidiously and that it usually requires prolonged, daily contact, similar to that practiced in families, schools, prisons, armies and almshouses for the virus to infect a normal conjunctiva.

#### TREATMENT AND PROPHYLAXIS

The treatment of trachoma from the standpoint of its victim and his physician and from that of the public health has been unsatisfactory for many years for several reasons. One is the long duration of the disease, even the mildest cases consuming years in their cure. Another is the relapses and exacerbations to which the disease is subject. Still another reason is that the trachomatous individual usually suffers from poverty and its twin, unhygienic surroundings, and either does not keep up the prescribed treatment or uses it improperly, or only comes for his treatment irregularly, or when suffering from one of the annoying complications or sequelae of the disease.

The treatment of trachoma from the doctor's viewpoint is unsatisfactory, in the first place because he cannot control his patient, second, because the patient is usually poverty-stricken and cannot pay a decent fee, and third, because the methods of treatment with which he is familiar are only applicable to certain stages of the trachomatous process and in only a small percentage of cases are they curative.

Until the last six or seven years the treatment of trachoma has been equally as unsatisfactory from the public health standpoint. This has been largely for the reason that no operation or method of treatment has been used in a large enough number of cases to show that it could cure trachoma in all its stages. It has remained for Surgeon John McMullen of the U. S. Public Health Service to achieve this happy result. About seven years ago Dr. McMullen went to Kentucky as the representative of the U. S. Public Health Service for the purpose of eradicating trachoma from the mountains of Kentucky, West Virginia and Tennessee where the disease had been endemic for generations. Accompanied by a representative of the State Board of Health of Kentucky, he visited every county in the state. He soon found that the disease was endemic and of a very severe type in the mountains of Eastern Kentucky and elsewhere. At the present time Dr. McMullen has under his direction three trachoma hospitals in Kentucky, two of which are in the mountains located respectively at Jackson and Pikeville and one in the southwestern part of the state at Greenville. He also has a hospital at Tazewell, Tennessee, and one in North Dakota. There is in charge of each of these hospitals a surgeon of the Public Health Service, trained by Dr. McMullen and familiar with and practicing his methods of diagnosis and treatment.

The method of operation used by Dr. McMullen and his assistant surgeons is a *grattage*, the technique of which was introduced by Dr. L. Webster Fox of Philadelphia. The patient, if a young child, is etherized and if an adult, four or five drops of a 4 per cent. solution of cocaine are dropped into the conjunctival sac at intervals of five minutes. The right eye is first operated on. The upper lid is caught with a special lid everter, devised by Dr. McMullen, which not only thoroughly exposes the tarsal conjunctiva but the retrotarsal fold as well. Some of the largest trachoma follicles are then scarified with a scalpel, after which the follicles and diseased tissues are removed by thorough rubbing with a tooth brush previously dipped in a 1-2000 bichloride solution. Then any remaining rough points or elevations are smoothed off with a bit of sterile gauze saturated with the bichloride solution. The finger is then passed gently over the mucous membrane to discover if there are any rough places left which were not visible to the naked eye. If any rough places are found, these are smoothed off with the gauze. In practically all cases the *grattage* is continued until the normal vessels of the tarsal arches are seen coursing through the conjunctiva. This operation of *grattage* has numerous advantages which make it an ideal one from the standpoint not alone of treatment but also of prophylaxis. In the first place, it can be used in all stages of the disease. In Knapp's operation of expression of the follicles one has to wait until the follicles are ripe, otherwise their contents cannot be expressed by the roller forceps. If the follicles are young and poorly developed it is evident that they cannot be eradicated by the roller operation. Again, even when the follicles are ripe and all the follicles are rid of their contents, which does not always occur, there are usually several other crops of follicles in the depths of the mucous membrane which are not reached. They develop in their turn and another roller operation becomes necessary. Another defect of the roller operation is that the inflammatory hypertrophy of the mucous membrane is left unaffected whereas this is either removed by the *grattage*, or so stimulated that it either regenerates or heals by cicatrization.

It would seem unnecessary to mention the various medicamental and mechanical methods of treating trachoma. They may hasten the cure, in almost all cases they render the sufferer more comfortable, but in not a few cases they apparently exert no influence on the course of the disease, and in some instances they are positively harmful. It is probable that their use is not much more beneficial than would be measures of cleanliness and personal hygiene.

The after treatment consists in one drop of a 20 per cent. solution of argyrol instilled into the eyes every three hours. This is kept up for six days at the end of which time all reaction fol-

lowing the operation has usually subsided. In two or three weeks time, on examining the lids one finds a smooth mucous membrane with no evidence of trachoma follicles, or papillary hypertrophy. In these cases which were largely granular there is very little scar tissue following. In a few cases where the papillary hypertrophy of the mucous membrane was marked, there is a greater amount of cicatrization than in the former. Reinfection with trachoma after the *grattage* is an extremely rare occurrence. This makes the operation an ideal one from the public health standpoint as well as from the patient's. It is particularly applicable and successful in children whose mucous membranes possess greater capacity for regeneration than adult's. Usually one *grattage* is all that is necessary to cure trachoma in children. It is the

old cases of trachoma that have cicatricial tissue and an infiltration of the tarsus, that demand more than one *grattage*. These are types of cases that should have hospital care. Children and adults who have not reached this late stage of the disease are taken care of in the trachoma clinics which Dr. McMullen has been conducting for the last seven years in Kentucky, Tennessee, West Virginia, Ohio, and various other states. During this time he and his assistants operated upon more than ten thousand cases. The results have been very gratifying from the standpoint of patient, physician and the public health. No other treatment promises so well, and no other method is supported by such a large experience. It is only a question of time until this operation will be almost universally used by oculists for the treatment of suitable cases of trachoma.

## The Early and Late Vomiting of Pregnancy with Special Reference to Its Treatment\*

C. E. Turner, M. D., Columbus

Editor's Note.—While the underlying cause of the vomiting of pregnancy is not yet known the tendency of prominent clinicians and obstetricians is to class it as a toxæmia similar in its pathological manifestations to acute yellow atrophy of the liver. Those who regulate their treatment on a toxic basis do not overlook the chances in nitrogenous metabolism and in the oxidating functions of the liver. Reflex causes and the neurotic tendency no longer receive the attention formerly accorded them. The type of case that interests the obstetrician most is that which has been styled pernicious vomiting and in which the symptoms increase in intensity until control by heroic treatment or death results. While the induction of abortion may be rarely indicated it is almost always possible to control the condition by less drastic means. Sedatives and hypnotics have their place in the therapy of pernicious vomiting as well as colonic flushing, gastric lavage and alkalinization. The dietetic regime is always a problem. Lately considerable reliance is being placed in the intra-muscular injections of corpus luteum extract. While effective in the neurotic type it has not proven quite as efficacious in pernicious vomiting. Further use will clear up its real therapeutic value.

THE so-called *morning sickness* of early pregnancy is so common that it is hardly to be regarded as abnormal. Indeed, it is one of the most reliable of the presumptive signs of pregnancy. Sometimes, however, the condition becomes exaggerated. The nausea and vomiting are not limited to the morning hours, but continue throughout the day and night. Not only is food rejected, but vomiting may continue when the stomach is empty. The condition may become so exaggerated as to impair the general nutrition of the patient or even to threaten her life. The morning sickness has become the *vomiting of pregnancy*.

Here again, as in the case of eclampsia, we are obliged to use a term that is purely empirical. Vomiting, of course, is only a symptom, not a disease. In this case it is the chief symptom of a condition the essential nature of which we do not as yet understand.

### ETIOLOGY AND CLASSIFICATION

The underlying cause of the vomiting of preg-

nancy is not known. The most plausible hypothesis advanced is that of toxæmia, but no serious attempt has been made to explain the nature of the supposed toxin or toxins. Stone, Ewing, and others, believe that the vomiting of pregnancy, preeclamptic toxæmia, eclampsia, and acute yellow atrophy of the liver are all results of one and the same cause, acting under different conditions and at different periods of pregnancy. This has not as yet been proven. It has been shown, however, that they all have certain things in common. For example, they are all accompanied by profound changes in nitrogenous metabolism and in the oxidative functions of the liver. To me it is most suggestive that oxygen has been found useful in the vomiting of pregnancy. There are still, however, many clinical and pathological differences to be explained, and many apparent contradictions to be reconciled, before this theory can be accepted.

There is no doubt whatever that the condition is more common in neurotic and hysterical subjects and in patients of neurotic heredity. Some women have a better appetite and digestion during pregnancy than at any other time.

Whitridge Williams, who has made exhaustive

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association during its 73rd Annual Meeting at Columbus, May 7th, 1919.



studies in this field, recognizes three varieties of vomiting: *neurotic, toxæmic and reflex*. He admits, however, in the latest edition of his work, that his belief in reflex causes of vomiting is rapidly diminishing. Personally I agree with him and with Kaltenbach, Bumm, and others that the alleged cures in these cases are, for the most part, the result of the procedures employed for the relief of the supposed causes, such procedures acting by suggestion. I regard this as clearly proven by the fact that Copeman's method of simple dilatation of the cervix with the finger unquestionably produces good results in many cases. Moreover, certain conditions often regarded as reflex causes, *e. g.*, constipation, really act by increasing the toxæmia.

In spite of all this, however, it must be admitted that the existence of a reflex cause is possible during pregnancy, as at other times, and it should be carefully sought for in every case which does not respond to treatment. Among alleged reflex causes are tumors, displacements and erosions of the cervix.

Most cases then are either neurotic or toxæmic. It is quite likely that toxæmia is the underlying cause in many of the cases that are put down as neurotic. Some writers, indeed, believe that toxæmia is the ultimate cause of all kinds of vomiting, even including the usual morning sickness. This, however, is probably an exaggeration since some women vomit almost from the moment of conception and it can hardly be claimed that toxæmia begins with the beginning of pregnancy.

#### PATHOLOGY

It appears that in the vomiting of pregnancy, as in eclampsia, the brunt of the burden falls upon the liver. The process differs from that of eclampsia, consisting in necrosis beginning in the center of the lobules, or in general fatty degeneration of the organ; whereas in eclampsia it is the result of thrombosis, and begins in the periportal spaces. As in eclampsia, however, the kidney changes are degenerative rather than inflammatory and are only marked in severe cases and in those approaching a fatal termination.

On the whole the lesions are much the same as in acute yellow atrophy of the liver.

Williams believes that the difference in the pathology is so marked that the cause of toxæmic vomiting must be essentially different from that of preeclamptic toxæmia. This the future will determine.

#### CLINICAL HISTORY

The condition is emphatically one of early pregnancy. It usually begins in the second month, though it may begin earlier. As the months pass its appearance becomes less probably. When, however, it begins early in pregnancy it may continue until the patient is delivered at or near term, as I have myself witnessed.

Nausea and vomiting occurring after the fifth or sixth month of pregnancy often indicate preeclamptic toxæmia; less often nephritis or some other intercurrent or complicating disease.

The symptoms of the neurotic type, or of the mild or benign type, as it is often called, are simply those of the ordinary morning sickness somewhat exaggerated. Instead of being confined to the early morning they continue with more or less persistence during the day and night. The patient vomits much of what is taken into the stomach, but by no means all, and some times less than is supposed. She is nervous and depressed. Constipation is the rule. The face is pallid and the patient obviously more or less anaemic. The pulse remains normal, however, and the loss of flesh is not marked. Urinary changes are slight or absent.

#### TOXAEMIC VOMITING

The clinical history of this condition has been well studied in France, where the condition seems much more common than in Germany, England, or America. The older writers styled this *pernicious vomiting*. This designation, though colloquial rather than scientific, is certainly very appropriate and expressive. Its beginning is usually the same as that of the neurotic type, but the symptoms do not respond to treatment, and the case goes on from bad to worse. The distinctive evidence of the toxæmic or severe type is rapid loss of flesh. This symptom, indeed, is the chief characteristic of the first stage.

Dubois, who has written upon this subject with singular accuracy and clearness, recognizes three stages:

The first period, or period of emaciation; the second period, or period of rapid pulse, the third period, or period of cerebral symptoms.

*First Period.*—After a varying period of what is regarded as the neurotic or benign type of vomiting the symptoms gradually become more severe. The patient now vomits not only after taking food but also when no food has been taken. The loss of flesh now becomes quite perceptible, and from this time on is rapid. The constipation, which is a constant accompaniment of even the milder forms, becomes more obstinate, and the urine diminishes in quantity. Ptyalism is common.

*Second Period.*—During this period emaciation continues and albumin appears in the urine, but the most characteristic symptom is the increased rapidity of the pulse, which may vary from 100 to 120. Jaundice and tenderness over the liver are ominous symptoms pointing to grave toxæmia. There is no fever, but on the other hand the temperature may be subnormal. The vomited matter becomes black from a mixture of blood. Gingivitis is common.

*Third Period.*—This is the terminal stage and was characterized by Dubois as the period of cerebral symptoms. The urine is dark in color

and almost complete suppression may ensue. Jaundice may become marked and the skin very dark in color. Delirium and coma precede the fatal termination.

In this country, at least, the stages are not always so clearly marked, nor are the symptoms so definite or characteristic. The third stage is seldom seen, perhaps because patients are not allowed to reach this stage.

In certain cases, fortunately very rare, toxæmic vomiting runs an acute and very rapid course, ending fatally in two or three weeks.

#### DIAGNOSIS

The symptoms of the vomiting of pregnancy are usually unmistakable, though one should not forget the possibility of ulcer of the stomach. It should be remembered that, as noted above, nausea and vomiting occurring during the latter months are more commonly an evidence of pre-eclamptic toxæmia. Persistent vomiting may precede a convulsion.

By far the most important point with reference to the diagnosis is the distinction between the benign and the pernicious forms, or, to use the current phraseology, between the neurotic and toxæmic types. This is, indeed, of the highest importance and may determine the final result, for the methods of treatment of the two types are diametrically opposed.

In the severe type the patient vomits, not only after taking food, but also when the stomach is empty. The pulse is often, though not always continuously rapid. Emaciation is progressive. Slight jaundice and tenderness over the liver may appear. These signs should always be carefully weighed. To wait for the phenomena of the third stage is to wait too long.

Most important is the evidence afforded by urinalysis. According to Soudern and others, acidosis is an early symptom of toxæmia. Albuminuria and a diminution in the total quantity of urine are danger signals.

According to Williams the urine of toxæmic cases shows a high ammonia coefficient, 20 to 50 per cent. as opposed to the normal coefficient, which is 4 or 5 per cent. In other words, the amount of nitrogen eliminated as ammonia is proportionately very large. The urea and total nitrogen are diminished. This sign may afford valuable corroborative evidence, but its recognition requires the services of an expert analytical chemist. Moreover, since it may be present in the terminal stages of any exhausting disease, or in acidosis from any cause, it is of negative rather than positive value. For example, if the ammonia coefficient is 5 per cent. or less, the vomiting is not toxæmic in character and even when the coefficient is high this may be due to inanition from any cause, or to other conditions which seriously interfere with metabolism. Nevertheless, if further experience shall confirm these con-

clusions it will prove of great value in deciding the question of the induction of abortion.

In the majority of cases then the practitioner will still be obliged to fall back upon the clinical evidence already discussed.

The duration of the neurotic cases varies from a few weeks to several months, and in some cases even to the end of pregnancy. The duration of the toxæmic cases averages two or three months. In certain cases, fortunately rare, the toxæmic variety runs a very rapid course, ending fatally in a week or two.

*A single word of caution. The physician should not take it for granted that the vomiting of pregnancy is impossible in unmarried women. I recall a case in which the patient was supposed to be suffering from ulcer of the stomach. She was unmarried and no suspicion of the real condition was entertained. Every case of persistent vomiting in a woman of child-bearing age should be made the subject of careful investigation.*

#### PROGNOSIS

There is a mysterious and unaccountable difference in the figures given by different observers. The French, unquestionably acute observers, and with more material at their command than others, report a mortality of 30 per cent. in the severe type. In Germany the mortality is much lower, while Carl Braun, of Vienna, in an enormous experience, has never seen a fatal case. Part of this difference, but certainly not all, may be accounted for by the fact that the induction of abortion is resorted to earlier in Vienna and in Germany than in France.

In the neurotic type the prognosis is good. With proper treatment the cure is neither difficult nor delayed. This is also true of the rare cases in which the trouble can be traced to some reflex cause. In the true toxæmic cases the prognosis is always grave, especially if the condition is allowed to continue. It must be, however, that this form is for some reason more common in certain countries and localities. I am sure that cases of death from the vomiting of pregnancy are rare in New York and vicinity.

#### TREATMENT

More interesting to the practitioner than all of these theoretical considerations, fascinating as they are, is the question of treatment.

It is well to clear the ground at the outset by a systematic search, external and internal, for the reflex causes of vomiting. Personally, I am of the opinion that most of them are imaginary, but that they do occasionally occur, is unquestionable. Moreover, such an examination, especially if the patient be allowed to regard it as a curative measure, often works wonders by suggestion.

Of course if any abnormality is discovered it should be corrected. Operable tumors should be removed, displacements corrected, and ulcerations cauterized.



I believe that Kaltenbach's conception of the vomiting of pregnancy as a neurosis marked an important advance in the treatment of this condition, and am free to confess that I had little success until I began to treat it upon this basis. The number of remedies that has been suggested is legion. Among them may be mentioned creosote, calomel, iodine, bismuth, cerium oxalate, pepsin, ingluvin, opium in one form or another, the bromides, chloral and various others.

In my opinion the best of these are those which have a sedative or hypnotic action. The aerated waters are always refreshing in nausea, and the old prescription of Fordyce Barker, a drachm of sodium bromide in a siphon of carbonated water, a draught to be taken every few hours, is often useful. Cocaine in doses of gr. 1-4 may give temporary relief; or the pharynx and nares may be sprayed with a 1 or 2 per cent. solution, thus abolishing the sensation of swallowing. Morphine hypodermatically may bridge over a temporary emergency. Adrenalin, in doses of ten drops of a 10 to 1000 solution, by the mouth twice daily has proven successful. Pepsin, hydrochloric acid, and similar agents are usually of little or no value, as might be expected, since the condition is ordinarily neurotic or toxic rather than gastric. In cases, however, in which the patient has been a dyspeptic before pregnancy, I have obtained good results from liquid taka-diastase in doses of one or two teaspoonfuls.

These patients are usually constipated and for the relief of this condition I have found cascara very useful. It should be given regularly for a time, the dose and the intervals between doses being adapted to the individual case. It may sometimes be advantageously combined with the tincture of *nux vomica*. Salines are to be avoided as tending to increase the anaemia already present. For the latter symptom some preparation of iron should be given.

The French, who regard this condition as an auto-intoxication of intestinal origin, attach great importance to thorough flushing of the intestinal canal, and this measure is doubtless of some benefit. Williams reports great relief in some cases by washing out the stomach and leaving therein 500 c. c. of a 1 per cent. solution of sodium bicarbonate. It is a curious fact that here, as in preeclamptic toxæmia, relief may sometimes be obtained by the inhalation of oxygen. This, together with the benefit sometimes derived from the administration of alkalies, tends, I think, to confirm my belief, expressed elsewhere, as to the importance of combating suboxidation during pregnancy. It would also seem to indicate that there is some connection between the two conditions.

#### DIETETIC TREATMENT

This is of less importance than one would suppose. If the patient vomits on rising or after breakfast, a cup of coffee or some preferred ar-

ticle of food should be taken while she is still in bed and in the recumbent position. As a rule acids are to be avoided and alkaline drinks like vichy or milk and lime water are to be advised.

Patients who have been dyspeptic before becoming pregnant should, of course, avoid things that are known to disagree with them, but, on the other hand if a patient suffering from vomiting of pregnancy expresses a desire for some unusual or apparently unsuitable article of food it may be advisable to allow it. Nature is sometimes the best teacher, and sometimes works by methods unknown to science. Rectal feeding, one egg in four ounces of pancreatized milk every few hours, or liquid peptonoids, may be tried for a few days, or even a week, but is not of as much value as was formerly supposed.

Solid food may be retained when liquid food is rejected, and vice versa. Oftentimes solicitous friends give too much food at one time. A teaspoonful may be retained when a teacupful is rejected. Sometimes it is taken better when hot, at other times when ice cold, and so on. A favorite expedient in the French hospitals is to give the *soupe de pain cuit* of Fochier. This consists of buttered toast made into a very thick soup with water and a little salt added. This is often retained by the stomach. The mere weight of the mass makes its rejection difficult. According to Fabre if it is once retained the case is cured.

In rebellious cases of the neurotic type sanitarium treatment, or at all events a complete change of scene and surroundings, may effect a cure after all else has failed.

Upon the hypothesis that the vomiting of pregnancy is due to the absence of certain antibodies that should be present in normal pregnancy, and that serve to counteract the injurious effects of the invasion of the circulation by fetal elements, various observers have recently treated the condition by the hypodermic injection of serum taken from the blood of a pregnant woman near term. Reports seem to indicate that this procedure is worthy of further trial. Injections of salt solution, the tube being carried far up into the colon, are very valuable. The patient lies with the head low and the hips elevated, the solution is allowed to enter drop by drop. In the more urgent cases the subcutaneous injection of salt solution in liberal quantities should be practised. Both these measures are to be highly recommended.

The physician should make his personality felt from the beginning. He should be confident and impart his confidence to the patient. If medicine is given or manipulation performed it should be done with the full assurance of cure. Keeping the patient in a darkened room and giving a little bromide in camphor water (Hirst) often suffices. An ice-bag over the epigastrium serves to diminish reflex irritability.

In the toxæmic variety, as determined by progressive emaciation, constant rapidity of the

pulse, persistent vomiting when the stomach is empty, and perhaps a high ammonia coefficient, the induction of abortion must be seriously considered. These cases involve a serious responsibility and the advice of an experienced colleague should always be sought.

In the induction of abortion ether or nitrous oxide should be employed, and with a liberal mixture of oxygen. In my opinion it is better to dilate the cervix carefully with the Hegar dilators, rupture the membranes, and tampon cervix and vagina. This can be done in a few moments and with practically no hemorrhage or shock. Strangely enough, the mere rupture of the membranes sometimes stop the vomiting at once.

The treatment of vomiting pregnancy with placental extract has not been a success as far as experiments have gone. We know that the placenta is only active during the stage of trophoblastic development. Any secretion formed in the placenta at this time would be in a stage of activity. If the trophoblastic stage has passed into degeneration, we would have no placental material with a specific action.

It is believed if a placental extract is going to be used it should be taken from a very early placenta or chorionic villi before the placenta becomes a complete organ. In women this practically begins about the fourth month.

I believe that the irregularities in selecting material for injections have given us most of our negative results. So far as the treatment of nausea in vomiting pregnancy we have found very little satisfaction.

Hermann, Halban, and others have shown experimentally that the physiologic action of the trophoblast is identical with that of the corpus luteum of pregnancy. If this is true, and if the corpus luteum has given us so much promise, then the extract of a fresh early chorion should give us even better results because there is more of it. It seems that much will be gained in future years along these lines. The dosage of placental extract may be 5 grains by the mouth three times a day.

To me, the most rational treatment in the vomiting pregnancy is the intramuscular injections of corpus luteum extract. We believe that every woman during her period of sexual activity absorbs more or less corpus luteum. Vomiting appears about this time and continues until the corpus luteum has greatly decreased in size. It is said by many that corpus luteum is closely related to this condition.

Hirst believes that corpus luteum injected intramuscularly takes the place of that manufactured by the patient herself. Personally I have seen corpus luteum by the mouth only increase the nausea.

The kind of corpus luteum used differs. The commercial extract is made from the ovaries of pregnant sheep, cows and pigs. Not only is the

vomiting relieved but sometimes a marked sedative action follows its administration.

In pernicious vomiting the result is not as satisfactory as in the other types. Hirst reports in all types of vomiting excellent results in over 89 per cent. of his cases. His cases cover three distinct types.

Personally in eleven cases of vomiting pregnancy, including two of the pernicious type, I have had very excellent results in the nine cases, and no result in the pernicious type. Both of these cases when seen by me were then in the abortive stage.

In conclusion I should say that in the neurotic type of vomiting pregnancy corpus luteum is by far the best bet, and that in the pernicious type it has given fair and encouraging results.

In the average case of nausea the patient usually responds to 1 m. dose every day or so. In the severe type where the nausea continues throughout the day with manifestations of a debilitated nervous system the dose should be 1 m. each day for about ten days, combined with this the patient should be kept in bed.

In pernicious cases two or three injections may be used daily without any harm. The deltoid muscle is the preferable sight for injection. All injections should be given deeply.

883 MT. VERNON AVE.

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### Campaign to Promote Physical Fitness

Ohio cities are evincing a keen interest in the "Keeping Fit Campaign" which was renewed in this state in co-operation with all other states in the Union on March 22. This movement to increase the physical fitness of Ohio's boys, which was started in January of 1919, was originally intended for boys in high school but has been extended to include the men and boys employed in factories and large manufacturing plants and those in rural communities.

One of the most effective means of publicity employed in the campaign is the special lantern slide and poster exhibit being given in various sections of the state by the State Department of Health. These exhibits drew large crowds at London, Mt. Vernon, Steubenville, Springfield, Willard, Ashtabula, Middletown, Mansfield and Steubenville in March, and others are scheduled for Bradford, Fostoria, Medina, Portsmouth, East Liverpool, Bellefontaine, Findlay, Middleport, Massillon, Zanesville, Lima, Bellevue, Marysville, Marietta, Canton, Van Wert, Nelsonville, Canton, Upper Sandusky, Washington C. H., Delaware, Alliance, Bucyrus, Marion, Ravenna and Crestline in April, and the first half of May.

Pamphlets, slides and charts have been furnished to health officers, school superintendents, ministers and Y. M. C. A. officials who have indicated a willingness to help in the drive, and are being given wide distribution.



## Devious Courses in Law Making and Enforcing Present Peculiar Problems in Dealing with Quackery and Cultism

The weakness in law enforcement against violators who have undertaken to treat the sick in Ohio and elsewhere has for years been due to the weakness in the penalty section of such laws permitting appeals, delays, and in many instances dismissal of prosecution without final verdict.

To remedy this situation in Ohio it will be remembered that the legislature last year enacted the Talley law (H. B. 176) giving final jurisdiction to the original court on first offenses, and without jury trial. Unlicensed cultists and other medical law violators were being prosecuted under this law when a group of unlicensed chiropractors invoked the court to restrain the State Medical Board from further prosecutions and on a peculiar technicality Judge Powell of the Common Pleas Court in Cleveland, before whom the case was heard, decided in favor of the plaintiffs on the ground that the legislature in the passage of the Platt-Ellis law in 1915, in recognizing chiropractic and other limited branches, had in effect recognized the standard schools of chiropractic in existence at that time and that the provision of the law giving the State Medical Board the right to establish rules and regulations, under which no school of chiropractic has been able to qualify, did not empower the Board to pass on the merits of such schools even when they refused the board permission to make inspection.

Another decision rendered in the Court of Appeals to which the case just referred to has been appealed, had already held in effect that the State Medical Board does have such right to establish rules and regulations necessary to properly enforce the law.

The section in the law on which the question hinges is that which reads:

"Sec. 1274—1. The state medical board shall also examine and register persons desiring to practice any limited branch or branches of medicine or surgery, and shall establish rules and regulations governing such limited practice. Such limited branches of medicine or surgery shall include chiropractic, naprapathy, spondylotherapy, mechano-therapy, neuropathy, electric-therapy, hydro-therapy, suggestive-therapy, psycho-therapy, magnetic healing, chiropody, Swedish movements, massage, and such other branches of medicine or surgery as the same are defined in section 1286 of the General Code that may now or hereafter exist, except midwifery and osteopathy."

Based on the foregoing section the State Medical Board had stipulated that applicants before being admitted to practice any of the limited branches should present documentary evidence of satisfactory completion at a *recognized* school of a course of study consisting of the following:

"Anatomy, physiology, chemistry, bacteriology,

pathology, hygiene and diagnosis, prescribed by the State Medical Board as the minimum requirement for medical colleges, which course must cover a period of at least two years of thirty-two weeks each, exclusive of holidays and vacations, in two separate years."

On this point the following excerpt from the decision in the Court of Appeals rendered by Judges Dunlap, Washburn and Vickery and later reaffirmed by the Supreme Court to the effect that any and every person who attempts to practice the healing art should be grounded in the fundamentals and be able to recognize the differences between different diseases, and to recognize the importance of diagnosis. "We are not greatly concerned that you should know what you are about to attempt to cure. We are more concerned that you should properly diagnose the case which you are called to treat than we are about your therapy or method of cure," declared the Court.

"All of these limited branches were placed by the law under the control and guidance of the State Medical Board consistent with the theory conceived by the legislature in 1902. Provision is then made in Section 1274-2 for the examinations of applicants for practice in these limited branches which seems to be perfectly reasonable so far as applicants are concerned and against which such applicants have no just ground for complaint.

"The solid and enduring argument against the passage of this and all similar laws (referring to a bill introduced some years ago seeking to divorce the respective branches of osteopathy and medicine) is and must be that encouragement should not be given to a separation or division of the healing art into schools, to the setting up of one against the other, and to the creation of rivalry among them; that every encouragement ought to be given to an exactly opposite tendency, to-wit, the gathering together under the general head of medicine of all the knowledge of the world concerning the healing art; and that when some discovery of importance is made in this field it should not instantly justify the birth of a new school of healing or therapy, at once seeking to divorce itself from its proper sphere, but should gain its recognition through the constituted medical and scientific channels.

"It is not to be wondered at that the legislature did not sanction this proposal, continues the decision. "Had it taken this step, such might very well be regarded as a precedent for the establishment of all kinds of boards, and we would today, in view of the partial recognition that has been given to so-called limited branches, probably have the state medical board, the state osteopathic board, the state chiropractic board, the

state electro-therapeutic board, the state mechano-therapeutic board, the state suggestive-therapeutic board, the state Christian Science board, and the state board of massage, and perhaps also the state board of chiropody."

The decision above quoted was rendered in the case of *Shaw vs. the State* in which the plaintiff in error, one Fred Shaw, was tried and convicted in the Probate Court of Summit County for unlawfully practicing medicine and surgery.

Much of the decision rendered by Judge Dunlap has to do with the practice of osteopathy. The following notation, however, is particularly pertinent:

"There was osteopathy, however, not claiming to be a limited branch, but claiming all the dignity of a complete school of healing, and after a short period of existence, embracing, perhaps, a decade, demanding all the recognition and legal sanction which had only just been accorded to medicine after the lapse of thousands of years since the beginning of the world. No, the legislature was not and in the nature of things could not be, qualified to grant this demand. It did see fit, however, to go part way. It recognized the existence of the cult and its probable right to exist, and to grow and prosper. It said to the osteopaths: 'We don't understand your therapy any more than we understand the method of cure by drugs, but we do have certain ideas about what any person and every person who attempts to practice the healing art should at least know and be reasonably informed about. We hold it to be fundamental that your school teaches the same anatomy, the same principles of physiology and obstetrics that are taught by medicine, and that you recognize the differences between different diseases and recognize the importance of diagnosis. Upon these subjects there can be no glaring difference between medicine and osteopathy. We are not greatly concerned about your method of cure, but we are greatly concerned that you should know what you are about to attempt to cure. We are more concerned that you should properly diagnose the case which you are called to treat than we are about your therapy and method of cure.' And so it passed the law of 1902, found in 95 O. L., 212, being now Section 1286 to 1293 inclusive, General Code.

"These sections provide in general terms for two examinations for applicants, one by a board of osteopathic examiners, upon all things which they regard as essential for the practice of osteopathy, and one by the State Medical Board on subjects which to the lay minds of the legislature appeared common and fundamental to all branches of the healing art. Some slight and immaterial amendments have since been made by the legislature, but the law in the main still stands as the medical law of the state.

"To it has since been added, as the cults or schools began to grow in influence, certain provisions for the practice of the so-called limited

branches of medicine or surgery, Section 1274-1 providing for the limited branches of chiropractic, naprapathy, spondylotherapy, mechano-therapy, neurophy, psychotherapy, magnetic healing, chiropody, Swedish movements and massage,' and then (comprehensively, so as to be done with it, perhaps), 'such other branches of medicine or surgery \* \* \* that may now or hereafter exist, except midwifery and osteopathy.' The reason for these last exceptions undoubtedly was that laws already existed providing for their practice. All of these limited branches were placed by the law under the control and guidance of the state medical board, consistently with the theory conceived by the legislature in 1902 and permeating the law where provision was made for osteopathy alone. Provision is then made in Section 1274-2 for an examination of applicants for practice in these limited branches, which seems to be perfectly reasonable so far as such applicants are concerned, and against which such applicants have no just ground for complaint."

Strange then is the contrast found in the decision rendered by Judge Powell restraining the State Medical Board from prosecuting unlicensed chiropractors. So interesting is this document that a large part of the decision is here reproduced:

"Plaintiffs further allege that, if it be finally adjudged and decreed that said business is a limited branch of medicine or surgery, said defendants are proceeding against said plaintiffs and others similarly situated in the State of Ohio, by unreasonable, arbitrary and capricious acts and conduct, in violation of law, in the following particulars:

"A. That said board, acting under the provisions of Section 1274-5 (105 O. L., 204), have unreasonably, arbitrarily and capriciously refused to approve any of the schools, colleges or institutions giving instruction in chiropractic, within the United States, and have not approved any such school, college or institution, although many of the same are in good standing, as required by said act; that the schools named in the amended petition are not only standard institutions, but are the leading institutions teaching chiropractic within the United States, and that, at divers times, beginning May 3, 1915, and to the present time, divers and many chiropractors who were educated in and received complete courses of instruction in one or more of the four colleges named, as well as other chiropractors who had been educated in and received complete courses of instruction in other schools, colleges and institutions teaching chiropractic within the United States, have made application to said board to be admitted for examination for a certificate, under said act; that each of said applicants so applying have presented the said board their certificate or diploma, issued by one of said schools, colleges, etc., and that said board uniformly refused to admit any of said applicants to such examination,



and that each and all of said applicants have been denied the privilege of taking the examination, or any examination, so as to evidence their qualification to receive a certificate from said board, entitling them to practice said limited branch known as chiropractic, which act of said board, in excluding all applicants from examination was unreasonable, arbitrary and capricious.

"Further allegations are made under this paragraph, charging that the officers and members of said board are biased and prejudiced against the practice of chiropractic as a limited branch of medicine and surgery, as well as against those who practice or desire to practice the same.

"It is further alleged that of the several hundred who have made application to practice chiropractic within the state since May 3, 1915, said board has refused to admit all of them to an examination, except only such who could qualify under the exemption provisions of Section 1274-2 General Code, and that, under date of August 11, 1915, the then secretary of said board, by and with the approval of said board, determined that no school of limited practice would be recognized by said board, unless they teach the subjects required by said board, that they much teach, and that the subjects of examination mentioned in Section 1274-2 General Code might not be taught by any other school or institution, save one connected with a medical or osteopathic school or institution; which rulings are still in full force and effect and unmodified.

"Doctor Platter, secretary of said board, upon the witness stand, admitted that the Medical Board had not approved any chiropractic school, college or institution, or individual, giving instructions therein, and that no chiropractor has been licensed since the passage of the Platt-Ellis law, except those who came in under the exemption clause of the law.

"The evidence, by affidavits, shows that the board still continues to demand of applicants that they present diplomas or certificates from approved schools, colleges or institutions of chiropractic, while, in fact, no such schools or institutions have been approved, and upon that ground, refusing the applicant an examination as to his qualifications, because of a lack of diploma from approved schools.

"The evidence also shows that the schools named in the petition, teaching chiropractic, are the leading schools teaching chiropractic in the United States.

"Section 1274-5 provides that the State Medical Board shall determine the standing of the schools, colleges, institutions or individuals giving instruction in such limited branch.

"This statute does not define what shall constitute 'in good standing,' as applied to a school or institution giving instruction in limited branches of medicine. As stated by the court in its opinion in *State vs. Coleman, et al.*, 64 O. S. 377, page 388, this statute 'has undoubtedly left

much in this respect to the sound discretion of the members of the board.' But this discretion must be exercised for the public good, and should be controlled by judgment, and not by passion or prejudice. When this discretion is abused, and made to work injustice, it is the duty of the court to interfere and control that discretion of the board.

*State of Ohio vs. Boone*, 84 O. S. 346.

*Dent vs. West Virginia*, 129 U. S. 114, and other authorities cited in plaintiffs' brief.

"The legislature recognized the science, art, business or profession of chiropractic, when it enacted what is known as the Platt-Ellis Law. In enacting this law, permitting the practice in limited branches of medicine and surgery, the legislature must have intended to mean that those persons applying for certificates to practice any of the limited branches named in Section 1274-1, of whatever school, shall have and shall exercise, the skill usually possessed by practitioners in good standing of that school, or limited branch, and that the board, in determining the standing of schools, colleges, institutions or individuals, giving instructions in such limited branches, if any of such schools, colleges or institutions has established a favorable reputation among members or persons practicing that particular limited branch, then such school should be approved, as in good standing.

*State vs. Coleman*, 64 O. S., 377 (*supra*.)

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"B. Under Paragraph 'B,' of amended petition, plaintiffs contend that the board has exceeded its authority in placing a limited definition on the business of chiropractic, illegally making such definition and description the basis of prosecutions by arrest and indictment.

"The so-called Platt-Ellis law does not define the business of chiropractic. Section 1274-1 provides that said board shall establish rules and regulations governing such limited practice. If the legislature intended to vest the board with power to say what shall constitute a penal offense, it would be in violation of various sections of the Ohio and Federal constitutions. If the board is assuming this power, such assumption of power is unwarranted, and cannot be sustained.

"The board has defined 'chiropractic' to be 'the detecting and adjusting by hand only of vertebral subluxations.' Paragraph (a), page 6, under definition, 'Rules,' of the rules and regulations governing limited practice, adopted January 4, 1916, amended June 4, 1918.

"At page 7, the said rules further provide:

"'Holders of certificates of a limited branch or branches of medicine or surgery, issued under Group 2, must conform their practices to the definition of the limited branch or branches of medicine or surgery specified in their certificates.'

"Again, on Page 3:

"'Failure to comply with the rules and regulations established, governing the practice of the branch specified in the certificate will not only warrant prosecution for illegal practice of medi-

cine and surgery, but subject the offender to prosecution for revocation of license.'

"This law says that the medical board may examine and certify whether an applicant is competent to be either one of their number, or to practice in the limited branch, and no one can lawfully practice medicine and surgery without such certificate, but this board cannot decide for mankind that their own system of healing is now and ever shall be the only correct one, and that all others are to be repressed by the strong arm of the law.

"In carrying out the provisions of this law, it would be well for this board to keep in mind that medicine is an experimental, and not an exact science; that the purpose of this law is to regulate and safeguard the use of powerful and dangerous remedies, like the knife, and drugs; that it does not and cannot, forbid dispensing with them; that the object is not to make any particular mode of effecting a cure unlawful, but simply to protect the community from the evils of empiricism.

"A reasonable interpretation of this law, known as the Platt-Ellis law, will permit the board to determine what standard of proficiency shall be adopted, what practical tests shall be required of the applicant, what questions shall be asked, and what mode of examination shall be pursued. In other words, all that the board can do is to regulate the mode of procedure to carry into effect what the legislature has enacted. I do not mean to say, and do not want to be understood as holding, that this board may not make fair and reasonable regulations which apply to any and all persons engaged in the practice of medicine, or that, for a violation of the same, upon charges being preferred, and hearing had, the said board might not revoke the license of a practitioner, if found guilty, and said practitioner was given the right of appeal from such decision; and, for the purpose of holding examinations, and the issuing of certificates to practice under this act, that the board may not define the various limited branches, provided that that definition is a fair and just definition, and does not arbitrarily and unfairly limit the so-called limited branch.

"This board has not only established a limited definition of the business of chiropractic, but has attempted to make its violation a criminal offense. This action of the board cannot be sustained.

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"The matters set forth in Paragraph F contend that Section 1274-6 of the General Code of Ohio (105 O. L., 204) creates an illegal and unconstitutional classification and discrimination, and that the board has further created an illegal and unconstitutional classification and discrimination in the adoption of rules under the authority of said section. It would be sufficient for me to say that, on the authority of *State vs. Gravett*, *supra*, and *State vs. Gardner*, 58 O. S. 599, that

that portion of Section 1274-6, reading as follows: 'that in addition to the power of the board to revoke and suspend certificates provided for in section 1275 of the General Code it may also revoke or suspend the certificate of any one to whom a limited certificate has been issued upon proof of violation of the rules or regulations established by the board governing such limited practice.'

discriminates unjustly between persons in the same calling, and is invalid, and that the rules of said board, based upon said section, are also illegal and invalid.

"A restraining order will therefore be granted, and a journal entry may be prepared in accordance with the foregoing.

\* \* \* \*

All of which further shows that the mills of the gods, so-called grind slowly. In the meantime, a certain proportion of the gullible public will be imposed on, ruined in health and lightened in pocket.

When this side of the millenium will the makers of laws and the interpreters of laws learn that the tampering of health is a serious menace of society, and that the medical profession is not selfish in warning of these dangers but rather that its position is woefully misunderstood? From a financial standpoint members of the medical profession would of course be much better off when the cultists and quacks thrive for the victims of these later must and will eventually be forced to turn toward thorough scientific, efficient medical service.

#### SMALL ADVERTISEMENTS

*Location for Physician*—The village of Newtonsville, Clermont County, is without a physician. The former resident physician, who has removed from the village to take up his work as health commissioner at the county seat, states that this is a good location. Address G. M. Roudebush, Newtonsville, for further information.

*Physician Wanted*—Residents of the village of Tippecanoe, Harrison County, are anxious to have a physician locate there. Letters concerning this situation, from Mr. C. J. Allen, secretary of local order of the United Mine Workers of America, and Mr. J. C. Stewart, druggist, state that this is a good location, having a population of about 1,500 within a radius of seven miles. Requests for information should be directed to Mr. Allen or Mr. Stewart at Tippecanoe.

*For Sale*—Modern office and residence combined, good roads, town of 1,100 inhabitants in northwestern Ohio, three railroads, churches and first-grade high school, practice \$8,000. Address M., care *The Journal*.

Advertising keeps new and fresh goods on sale; while unadvertised goods go stale, and are shopworn. Advertising is a guaranty of quality.



## Toledo Is Preparing On An Elaborate Scale for Your Reception at the Annual Meeting in June

Plans for the seventy-fourth annual meeting of the State Association to be held in Toledo on Tuesday, Wednesday and Thursday, June 1, 2 and 3, are rapidly taking form and all indications point to an enticing convention in the breezy city from the first morning to the afternoon of the third day.

Dr. John G. Keller of Toledo, councilor of the Fourth District and general chairman on arrangements for Council, assisted by the local committees, is working at top speed to insure the visitors an enjoyable and beneficial meeting. He announces that quarters for the various general and section meetings have been selected.

The Y. M. C. A. building which stands on the west side of Courth House Square in practically the heart of Toledo, will be used as general headquarters. Here will be located the registration bureau, scientific and commercial exhibits and sections meetings. Other sessions will be held in the Elks Home adjoining the Y. M. C. A. This is a particularly happy arrangement in view of the fact that these buildings are easy of access from the principal hotels.

As in the past, the program is being arranged to cover two days and a half. The meeting will open with a general session at ten o'clock on the morning of June 1, when Dr. J. F. Baldwin will deliver the annual address of the president. Immediately after this address the first session of the House of Delegates will be held. In the afternoon all seven sections will hold scientific sessions. The early part of the evening will be devoted to the second meeting of the House of Delegates, following which the smoker, for which elaborate plans are being made, will be staged.

On Wednesday morning the scientific section meetings will again hold sway, and in the afternoon the House of Delegates will wind up its work in a short session preceding the second session scheduled for three o'clock.

Much interest in this session has been manifested since the announcement that the annual orations will be delivered by Dr. Llewellys Franklin Barker, professor of Clinical Medicine at Johns Hopkins, and Dr. Hugh Cabot, formerly of Boston and now of the University of Michigan. Dr. Barker has chosen as the subject of the Oration in Medicine "High Blood Pressure, Its Causes and Management." For the Oration in G. U. Surgery Dr. Cabot will speak on "Non-Tubercular Infections of the Kidney."

The annual banquet will be held on Wednesday night. Negotiations are now being made to secure one of the nation's best known humorists as the speaker and the occasion should prove thoroughly enjoyable.

The last feature of the convention will be the joint meeting of the Medical and Surgical Sec-

tions on Thursday morning. The program this year will be devoted to a symposium on "Exophthalmic Goitre" by a group of four physicians who have done extensive research work in this branch. The program for the joint session is always arranged with a view of presenting something of special interest to every member in attendance, and this year's arrangement will be no exception.

There is every reason to believe that the Toledo meeting will be one of the largest and most successful in the history of the Association. Last year's session was admittedly a bell ringer and our Toledo friends will have to work hard to surpass it. They have one advantage, however. At the time of the 1919 meeting many physicians were still absent in military service, and most of those who attended had scarcely come down to earth after the war experiences sufficiently to enjoy to the fullest extent the good things offered. With practically all of the military men returned, rich in experiences gained during service, and the war nearly two years behind us, nothing should mar the 1920 celebration.

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### Summit County Buys Tuberculosis Hospital

The sale of Springfield Lake Tuberculosis Sanatorium was consummated, March 23, when Summit County purchased the interests of Mahoning, Stark, Columbiana and Portage Counties, joint owners of the institution.

For its share, based on capitalization cost, Mahoning County received \$90,690.29; Stark \$80,011.21; Columbiana \$44,038.32 and Portage \$25,068.95. Summit County's share, computed on the same basis, is valued at \$83,382.23. Each county is given a year in which to remove its patients, with the exception of Stark which is granted two years, and will pay a weekly rate for the care of patients remaining during this period.

The transfer of the sanatorium ended a long controversy over the function of the institution and its management. Summit County has maintained that the sanatorium was devoted to the treatment of advanced cases of tuberculosis and favored converting it into a curative institution or the extension of its facilities to provide curative treatment. Other counties refused to make the necessary expenditures for this purpose and the sale was finally agreed on.

Summit County voters had previously passed a bond issue of \$300,000 for the erection of an independent hospital and this money was used in acquiring the interests of the other counties in the inter-county sanatorium.

## OHIO PUBLIC HEALTH NOTES

Cleveland will strengthen its fight on venereal diseases by opening a new clinic for their diagnosis and treatment at Fairview Park Hospital on May 25. It is estimated that 20,000 cases needing treatment exist in the city, which now has in operation one public clinic and a 50-bed ward at the City Hospital, in addition to three private clinics at Lakeside, Mt. Sinai and Charity Hospitals.

—A community drive for funds with which to pay the salary of a public health nurse was made in Kenton during the first week of March.

—Out of 22,385 public school pupils given medical examinations in Youngstown recently, 13,469 were found defective, according to the report of Dr. Charles B. Lewis, school physician. Poor vision, teeth and tonsils and nasal obstructions covered 80 per cent. of the cases.

—Hardin County advisory board has approved a budget of \$4,000 for the work of the newly organized health board. The items in the budget are: health commissioner, \$3,000; serums, \$200; deputies and expenses, \$800.

—Cincinnati's birth rate for the first month of 1920 as compared with the corresponding month last year, shows a decrease of 42 and an increase of 7 in the death rate. Births for the month numbered 685 and deaths 585.

—The president of the Springfield board of education has recommended the placing of the school medical system under a health supervisor and has suggested the name of Dr. Delos W. Hogue in connection with the new position.

—A closing ban was in effect in the village of Alger, Hardin County, in early March as a result of 12 cases of smallpox.

—Pointing out possibilities for improvement of the safety, civic health and sanitary conditions through cooperation of the Cincinnati medical profession with the local Chamber of Commerce, the latter organization has invited 800 physicians to enroll as members.

—The Ohio Society for the Prevention of Tuberculosis plans the organization of a health program for the children of the Ohio Schools. In localities feeling the need of this type of work, a representative from the Society will aid in outlining programs for local adoption. A more complete outline of proposed activities will appear in this publication at a later date.

—A careful study of the influenza situation at Kelley's Island, where nearly one-fourth of the population was stricken, was made by Drs. Ross Hopkins and J. V. Armstrong of the United States Public Health Service in February and March. Because of its isolation the Island afforded unusual opportunities for observation.

—Investigations made by City Chemist Knopf of Cleveland, in a novel campaign against adulterated and spoiled foodstuff have uncovered quantities of over-ripe sauerkraut, sugar adulterated with cereal, spoiled raisins and watered tomatoes. Knopf is being assisted by federal officials in the investigation of interstate shipments.

—The narcotic clinic which has been operated for several years at the Youngstown police station was closed February 20. From 40 to 60 persons have received semi-weekly treatments at the clinic.

—Dr. J. A. Burnett, Hamilton school physician, has recently inspected medical systems in the schools of Dayton and Cincinnati with a view of adopting methods which meet requirements in Hamilton.

—Reports received by the State Board of Administration in the latter part of February indicated that many of the state's wards were ill. Of the 181 pupils enrolled at the state school for the blind, 31 were sick, 12 having mumps, 11 scarlet fever and 8 measles. More than 100 new cases of influenza were reported at the Boys' Industrial School, Lancaster.

—Benefits to be derived from a proposed program of physical education in the Columbus public schools were outlined before the recent meeting in that city of the Ohio Physical Education Society. The society wired congratulations to Congressman S. D. Fess, Yellow Springs, for his introduction in Congress of a national physical education bill. Dr. J. H. Nichols of Ohio State University is secretary-treasurer of the society.

—A "Know Your Community Better" canvass conducted in Covington in February and March under the auspices of the local Community Council emphasized the need of medical inspection in the schools and extended recreational facilities for children. Committees on child welfare, recreation, family welfare, health, education and community organization engaged in the survey whose findings will serve as the basis of a definite improvement program.

—Changes in the state service include a number in the State Department of Health, where difficulty is experienced in keeping an adequate staff at work, as the result of offers of better compensation elsewhere. Recent appointments in the department include that of Dr. Robert Lockhart as head of the trachoma department; Mrs. Zoe McCaleb as trachoma nurse, and Drs. Ralph B. Tate and Lloyd Jonnes as district health supervisors.

—There were 248 more cases of measles in Columbus during February, 1920, than during the same month in 1919, when only three cases were reported to the health department. Other contagious diseases including scarlet fever, chickenpox, diphtheria and whooping cough were also more prevalent in the first two months of the present year than last year.



## A Direct Message to You on Pressing Professional Problems from Former Executive Secretary, George V. Sheridan

*Note—In true Sheridanesque style, George V. Sheridan, former executive secretary of the Ohio State Medical Association has addressed the following communication to The Journal. As you know, for almost a year Mr. Sheridan has been the publisher of the Springfield (Ohio) Sun. From his viewpoint of business affairs, political surroundings, and public interests generally, he is able to throw a very illuminating sidelight on problems now requiring solution by the medical profession of Ohio.—D. K. M., Ed.*

Editor, *The Ohio State Medical Journal*:

For nearly six years, through the columns of *The Journal* and in almost innumerable talks before the various county medical societies, I preached to the physicians of Ohio the need of medical organization.

I always had in the back of my head a rather persistent suspicion that some of them felt I was working to feather a nice comfortable little nest for myself. I know that some physicians discounted what I said, because—as executive secretary of the State Association—I was paid to develop the medical organization idea.

I preface my note with this statement, to better emphasize the point which prompts me to write this letter to *The Journal*. Now that I am well removed from the Association's pay-roll, and can be accused of no motive other than real friendship for a group of men with whom I was pleasantly associated, I sincerely hope that my advocacy will have more weight than it seemed to have at times in the past.

When I read in *The Journal* the other evening that the Cleveland Academy of Medicine had under serious consideration a plan for real, intensive, practical organization, I was very much pleased.

As I read further into the detail of plans, I saw that the three members of that Cleveland committee had a real vision as to the needs of the situation.

I am writing this in the hope that it may in a small way contribute to the development of an appreciation in the minds of the members of the profession in Cleveland of the importance of this plan, and of its practical value to them.

For nearly a year I have been completely out of touch with medical organization, but I believe that this detachment has made me better able to judge the actual value of these things. In those months I have come into close touch with business in general, and have gained a better idea of the decided trend in all lines toward organized and co-operative effort.

The Cleveland plan is nearly ideal, in my

opinion. Its operation will be a splendid thing for the State Association as well as for the physicians in that city, because the plan quickly will demonstrate its value and will spread to the other large cities of the state. Not until then—until in Cleveland, Toledo, Cincinnati, Columbus, Dayton, Akron and possibly some of the smaller cities develop local organizations with full-time executives in charge—will the medical profession of Ohio be properly organized.

If the Cleveland Academy will lead the way, its members will find the investment profitable. It will take large annual dues to maintain such an organization; but I maintain that they quickly will find it profitable. Dues of \$50 per year per member are only relatively large. The trouble in the past has been that doctors have tried to finance their organization on a shoe-string. It will not work in organized medicine any better than in other fields.

This matter of dues, which is vital, should be approached by the physician in a manner entirely different from that to which he is accustomed. He should view it in the light that the business man regards his trade or business association. The man in business frankly recognizes its value to his business, and its need to the continuance of his business, and pays accordingly. In almost every line of commerce the trade association is viewed as one of the factors in the cost of producing the article, and the cost of that association affiliation is charged up as a cost of production. For example, in my present work as publisher of a daily newspaper I find that active membership in the American Newspaper Publisher's association is not merely a pleasant social connection, but a very necessary factor in my business. The association affords me protection against conditions in dealing with which, as an individual publisher, I would be helpless; it keeps me in touch with the work of other newspaper men and enables me to profit by their experience. I do not particularly care what that membership costs, so long as I know that the cost is equitably divided among all publishers and that the thing is fairly managed.

Until the physician comes to regard his association, state and national, in a similar light, he is sure to be a penny-pincher. And if the individual physicians will not adequately finance organized effort, you may well quit trying to be of practical benefit to them.

In the years of my connection with the Ohio profession I found a steadily growing recognition of the need for organization of the intensive type. There were, and are, and always will be small-minded men in every community. These,

unable to see beyond the end of their noses, will oppose plans such as is proposed in Cleveland. But there are enough men of broad vision to smother these little pig-eyed fellows—and now is the time for the big fellows to swing into action.

For years while I was actively connected with the work I had a vision of what the State Association could be made, and the Cleveland plan is the first step toward that realization. First, of course, was the necessity of developing a state organization which could produce an influential journal, afford protection against black-mailing malpractice claimants, cope intelligently with situations which, like the development of the workmen's compensation scheme, were pregnant immediately with disastrous possibilities. These things, and many others the State Association now does. But back of any effective state-wide effort there must be adequate local organization.

In my connection, I found that the organizations in the small counties were far more effective than those in the large cities. In the small counties everyone was interested. They could, and would work effectively in accord with almost any state movement. But in the cities, a much smaller percentage of the profession was actively interested.

This was clearly shown in the legislative situations which developed. Quackery and humbugism found few supporters in the rural counties. Through the local organizations we were able always to secure at Columbus a respectful audience with the rural legislators. But when the legislative delegations would roll in from Cleveland, and Cincinnati, and Toledo—and particularly Toledo—and the other large cities, I would knock on wood and silently offer one of my infrequent prayers.

This was not because the large cities lacked men who were intensely interested, or who worked hard to co-operate in our effort to prevent the legislature from bequeathing the state to medical burglars. In every large city were some men who responded splendidly. But the job was a year-around job, a job that needed constant local attention and constant local education, from one year's end to the next. It was not a matter that could be handled as it is in the small counties, by a little concentrated work at the opportune time. It was, in other words, too big a job for a small group of busy physicians to handle.

The men managing the commercial interests who profit by breaking down every public health protection, recognize this. They work constantly. The result is that a handful of skalawags, in Cleveland for example, can almost without exception, exert more influence than the group of several hundred representative citizens who comprise the Academy of Medicine. They have gotten away with it for years.

The hopeful thing to me about the Cleveland

plan is that they are getting started in time. If they wait another two years they will be locking the garage after the flivver is missing.

I say this because I feel that scientific medicine is facing a death struggle, and that unless the honest practice of medicine is protected by those who appreciate its possibilities for good, it will be so hampered and handicapped that its practice will be unattractive.

Personally, I think that compulsory state health insurance is a harmful thing for the state, and a ruinous thing for Medicine. It will reduce medical practice to a plane where the incentive for brilliant service is removed, and where a premium will be laid on mediocrity.

I believe that if the physicians of this country will effect a first-class organization they can develop education which will make this fact evident to the country—off-set the undoubtedly effective propaganda of the long-haired and pinch-headed social reformers. Unless such organization is effected, speedily, this half-baked crew will foist this prussianized scheme on us. The New York state legislature's antics certainly made that point clear.

I became fairly familiar with medical organization work in the various states, and in my opinion Ohio has by far the best chance to develop the kind of an organization that can nip this and similar schemes. For that reason, I was delighted to see Cleveland swinging into line with a most effective contribution to that end.

I regret, at times, that doctors are so destitute of business sense. When it comes to looking after their own interests, they appear to be perfectly at home in swaddling clothes. As a layman, with some appreciation of the need (in behalf of the country at large) of developing a medical profession on a high plane, I hope that they will now rally to the protection of those interests. My belief, however, is based solely on the fact the thing has become so serious that, from this time forward, the best interests of the public are co-incidental with the best interests of the profession. And in six years I have never known them to fail to rally to the support of any movement in the interests of public protection.

In other words, protecting what might be termed the selfish interests of the medical profession has become identical with protecting the best interests of the great public. I have faith that physicians everywhere will respond to that appeal.

Now is the time. Hit hard. Scientific medicine proved its worth in the world war. We didn't hear much from the quacks in 1917, when Hell was loose. There wasn't any howling demand for chiropractors in Flanders, and Mary Baker Eddy's healers-for-profit-only were wise enough to remain almost conspicuously silent in those brass-tack days. But the pack is loose



again, yelping louder than ever. Furthermore, the war produced drastically changed industrial conditions which have an important bearing on medical practice conditions—the war made possible industrial advances which would have required many years to develop otherwise. To hold the advantage gained through results proved to the world during the war, and to secure for humanity adequate medical service under the changed conditions, organized fighting is necessary.

But please remember that to fight effectively you must be organized to fight. That Cleveland plan is the best two fisted argument I ever have had the pleasure to inspect.

Sincerely, George V. Sheridan.  
Springfield, Ohio.

### County Health Organizations Proceed as Financial Kinks are Straightened Out

Rapid strides are being made in the organization of health boards under the Hughes Law, effective the first of the year, amended by the Griswold Act.

Many districts are realizing that uniform and scientific methods of control of communicable diseases and the solution of other health problems can best be secured by competent physicians trained in public health work. The hesitancy on the part of some districts in completing their organization because of the financial question is gradually being lessened as they realize that the probable cost and improved service this year will be little greater than that for the preceding year.

An opinion from the attorney general, together with a letter from the auditor of state to county auditors pointed the way to obtain funds in the various districts.

Of the 88 counties of the state 72 have approved the budgets adopted by the district board of health, and 59 have appointed health commissioners. At several meetings the district advisory councils have failed to act because of the lack of a quorum, this being due in most instances to the condition of the roads, making it impossible for members to travel. In several districts the appointments of health commissioners have been delayed pending negotiations to combine the city and district.

A number of conferences with health commissioners in different sections of the state have been arranged by the state department of health. The first of these was held at Canton on March 10, when commissioners from eight counties of the northeastern section of the state were present and discussed various phases of public health work. The second conference was held at Lima on March 17. Permanent organizations were formed in each instance which will hold monthly meetings.

The following list gives the names of recently appointed commissioners and the districts in

which they will serve. These are in addition to the commissioners listed in the March issue of *The Journal*:

County	Commissioner	Address
Butler	Dr. Kirk R. Teachnor.....	Hamilton
Carroll	Dr. J. J. Hathaway.....	Carrollton
Clermont	Dr. F. A. Ireton.....	Batavia
Darke	Dr. G. W. Burnett.....	Greenville
Delaware	Dr. Albert J. Pounds.....	Delaware
Erie	Dr. F. M. Houghtaling.....	Huron
Greene	Dr. R. H. Grube .....	Xenia
Hancock	Dr. F. S. Whisler.....	Findlay
Hardin	Dr. Roy K. Evans.....	Ada
Harrison	Dr. S. B. McGavran.....	Cadiz
Highland	Dr. G. Rhoten.....	Mowrystown
Hocking	Dr. J. H. Elias.....	Murray City
Holmes	Dr. I. S. Putnam.....	Millersburg
Jackson	Dr. J. S. Hunter.....	Jackson
Jefferson	Dr. J. P. Young.....	Empire
Montgomery	Dr. C. H. Pansing.....	Dayton
Ottawa	Dr. C. B. Finefrock.....	Port Clinton
Pickaway	Dr. R. F. Hoessler.....	Ashville
Putnam	Dr. W. S. Yeager.....	Leipsic
Scioto	Dr. R. W. DeCrow.....	Sciotoville
Shelby	Dr. Arlington Ailes.....	Sidney
Stark	Dr. Chester M. Peters.....	Canton
Summit	Dr. D. D. Shira.....	Akron
Union	Dr. C. W. Hoopes.....	Marysville
Van Wert	Dr. Charles R. Keyser.....	Van Wert
Wyandot	Dr. O. C. Stutz.....	Upper Sandusky

### Law Violators Fined

Four violators of the Medical Practice Act were haled into the municipal courts of Ohio's cities during February and relieved of a portion of the cash which they had extracted from the unsuspecting public.

The case of O. M. Hoch of Cleveland, arrested on December 24, 1919, for unlawful practice of medicine and surgery, was heard February 4. The defendant pleaded not guilty and was given a fine of \$500.00 and costs. Hoch gave notice of motion in mitigation which was heard on February 7, when the fine was reduced to \$200.00 and costs.

One Ivan Lukac, also of Cleveland, claiming to cure every known disease with roots and herbs was arrested on February 9 for illegal practice of medicine. When the case was heard the following day the defendant entered a plea of not guilty and was sentenced to pay a fine of \$100.00 and costs.

Ben Slocum of Columbus, was convicted on February 24 for illegal practice of medicine and fined \$100.00 and costs.

Michael Jordan of Cincinnati, printer by trade, was fined \$100.00 and costs by Judge Yeatman on February 24 for practicing medicine illegally. A workhouse sentence was suspended on Jordan's promise that he would no longer attempt to exploit the power of his infallible cure for tuberculosis.

# THE CANCER CAMPAIGN

This department was inaugurated by the State Association's Committee on Control of Cancer for the purpose of keeping the profession in touch with the intensive campaign it has undertaken with a view to curbing the cancer menace. As part of the movement members of the committee have personally addressed, or have secured speakers to address a large number of county societies on this subject. If societies which have not devoted a meeting to the cancer question during the fall or winter, but are desirous of doing so, will communicate with State Association headquarters, naming a suitable date, the committee will arrange for speakers. The current paper is the seventh of a series prepared by Dr. Crotti to emphasize the fundamentals in cancer diagnosis and treatment.

## COMMITTEE ON CONTROL OF CANCER

Andre Crotti, M. D., Chairman  
Columbus

Chas. W. Moots, M. D., Toledo

Chas. E. Holzer, M. D., Gallipolis

Don K. Martin, Secretary  
Columbus

## Cancer of the Stomach

Andre Crotti, M. D., Columbus, Chairman

Committee on Control of Cancer, Ohio State Medical Association

CANCER of the stomach occurs with the greatest frequency between the ages of forty and seventy years, but the incidence of cancer is greatest between the ages of fifty and sixty. It is of rather more frequent occurrence in males than in females. It has been frequently stated that gastric cancer is uncommon in Jews, but after closer investigation of that statement, it would appear that living under similar conditions Jews are as prone to the disease as are the other human families. At the present state of our knowledge it cannot be said definitely that any type of work predisposes to gastric cancer. There seems to be, however, a definite preponderance among farmers. Accumulated evidence fails to demonstrate that special frequency of gastric cancer can be attributed to over-indulgence in any particular kind of food. All that can be said is that chronic over-eating appears to be more detrimental to the stomach than does the kind of food ingested. Careless mastication, indulgence in hot liquids, seem to have some special significance regarding the production of cancer, possibly by causing a chronic traumatism of the gastric mucosa. While there is much carelessly expressed opinion upon the matter, there is no proof that the partaking of alcoholic liquors predisposes to gastric cancer. Tobacco, syphilis, appear to have little direct etiological bearing upon the disease. That there is a direct relation between gastric ulcer and cancer seems to be well admitted. According to Smithie, Ochsner, and Mayo, sixty per cent. of gastric cancers follow gastric ulcers.

Taking all these facts into consideration, we may consequently conclude that mechanical, chemical, bio-chemical, or parasitic injury may cause a cancer of the stomach. That parasites ingested in the food are capable of actually causing certain atypic growths appears to have been shown recently by Febiger. As a consequence of

his feeding rats upon roaches infested with a certain nematode, growths of a cancerous type developed in large numbers in the stomachs of such rats. All that goes to show that here, as in cancer of the other organs, we find again "chronic irritation" as an etiological factor of cancer. Most likely, however, chronic irritation alone is not the only one factor essential in the production of cancer. Let us remember there is a cancer age, which means that during that period of life, the organism is more susceptible to cancer than during any other period. What causes this systemic susceptibility? No one knows. This is not the time, however, to discuss that particular phase of the cancer problem.

### PATHOLOGY

Ninety-four per cent. of all clinically or pathologically known forms of neoplasms primarily arising in the stomach wall are cancerous. Of the malignant gastric tumors sarcoma is of rare occurrence.

Here, as in most of the other organs of the body we find about the same pathological varieties of cancer.

1. The *scirrhous* cancer, a dense, well delimited, poorly vascularized growth, nearly always arranged as a tumor of annular type. The tendency to ulceration is great. It is firm, unyielding to the touch.

2. The *medullary* cancer, a soft, rapidly growing tumor, spreading rapidly and ulcerating early. The cancer cells quickly penetrate all the layers of the stomach; the blood supply is abundant; metastases are early and numerous.

3. *Ulcerating* cancer, which may be the outgrowth of changes going on in the scirrhous form, or may occur from secondary ulceration of the medullary carcinoma. At laparotomy this type is the most frequent. The base of the ulcer is usually firm, the edges are rather soft, ragged, vascular, and undetermined. Metastases in the



original lymphnodes and in the distant organs are very frequent.

4. *Colloid cancer*, the least frequent type of gastric cancer, due to mucoid degeneration and containing an egg-white, water-logged, translucent, jelly-like, thick fluid. It ulcerates rarely, spreads extensively, and is less apt to form metastases than the other forms.

So far as location is concerned, gastric cancer corresponds rather strikingly to the location of chronic gastric ulcers. In Smithie's and Ochsner's statistics of cancer of the stomach,

- 42% occurred in the pylorus;
- 24.7% in the lesser curvature;
- 12% in the greater part of the stomach;
- 9.3% in the posterior wall;
- 3.5% in the cardia;
- 2.3% in the greater curvature;
- 2.3% in the anterior wall;
- 0.9% in the fundus;
- 2.9% in multiple tumors.

#### COMPLICATIONS

Complications observed in well established gastric cancer may be as follows:

1. *Pyloric obstruction*, readily recognized by persistent vomiting of retained food, copious vomitus, and by X-ray examination.

2. *Obstruction of the cardia*, usually clinically recognized by dysphagia, vomiting soon after food ingestion, scanty urine, obstruction to the passage of a stomach tube, with or without free bleeding, and by X-ray examination.

3. *Malignant hour-glass*, rather a frequent complication in instances where a "saddle ulcer" has become malignant, or where a large tumor projects into the gastric lumen. While it may be suspected clinically, it can be most convincingly demonstrated by X-rays.

4. *Hemorrhage*. When gastric malignancy is well established hemorrhage is seldom as abundant as the one seen in gastric ulcer. In the large majority of instances there is a constant seepage which may be recognized by chemical tests for blood in gastric extracts and feces.

5. *Perforation*. Perforation of gastric carcinoma may be sudden or chronic. In sudden perforation the pain is generally not as severe as in the perforation of gastric ulcer. It usually takes place after vomiting, external traumatism, heavy meal, or some sudden exertion. Pain is sharp, lancinating, associated with shock, temperature is subnormal; abdominal distension and great prostration are present. Temperature generally rises fairly rapidly and terminal evidence of septic peritonitis becomes apparent.

Chronic perforation of gastric carcinoma occurs gradually and pain is much less severe. The leakage from the stomach is usually so slight that a walling off process has time to take place. As a consequence, perigastric abscesses or localized abdominal abscesses develop.

6. *Fistulae*. The frequent result of gastric

perforation is the production of gastro-colic fistulae.

7. *Metastases*. Metastases occur most frequently in the perigastric lymphatics, then in the liver, then in the lungs, and in the bones.

In gastric cancer the extent of the lymphoglands and metastases controls most certainly the prognosis. The size of the tumor in the stomach wall is but a relative index of the possible extent of perigastric lymph gland invasion. The size of the gastric lymphnodes themselves is no criterion of the degree to which they may be invaded. Minute glands may contain a greater number of more perniciously active cancer cells than do large glands, hence, the diagnosis and the prognosis of a gastric cancer is primarily in the hands of the surgical pathologist.

#### SYMPTOMATOLOGY

It is but a few years since catarrhal gastritis, hyperacidity, Reichmann's Disease, and pyloric spasm were considered definite disease entities. Only recently has the medical world accepted these pet ailments at their face value and regarded them as symptoms of gastric disturbances associated with ulcer, cancer of the stomach, or some infection of the gall bladder.

It is becoming more and more generally recognized that clinical gastric diagnosis gains in accuracy in direct proportion to the diligence with which inquiry is made into the past history of the trouble. As Smithie says, "*it is only by disengaging the patient from the present state, and endeavoring to determine and analyze his early departure from gastric health,*" that one is able to accurately judge what sequence of clinical events lead up to the immediate digestive disturbances. In other words, the present ailment complained of by the patient is but a partial index of the true nature of the disease. Its mode of incipency, and especially its course of development, as we shall see later, are of prime importance in establishing a clinical diagnosis.

It would be a mistake to believe that gastric cancer most commonly attacks individuals whose stomachs have been previously as Napoleon told his physician, "like iron." Ordinarily, a great number of these so-called "iron stomachs" have an important pathological history behind them.

Cancer occurring in the stomach may be classified into three classes:

1st, the one occurring in a stomach with a past history of gastric ulcer. This group is in the majority.

2nd, the one occurring in patients with irregular gastric disturbances without gastric ulcer.

3rd, the one occurring in individuals having enjoyed up to date apparently perfect gastric health.

Symptomatically, we find that in the first class the pre-cancerous period of the ailment resembles to a great extent the clinical complex we asso-

ciate with chronic gastric ulcer. During this period the attacks or spells of indigestion occur at frequent intervals and then subside. These attacks are associated with epigastric distress and are usually relieved by food. The food desire is usually strong, constipation is frequently present, and vomiting and bleeding are among the most important symptoms. Hyperacidity is quite marked. Loss of weight occurs during the attack but is regained during the interval.

If we catch clinically the exact moment when the benign ulcer begins to become malignant, we find it very difficult, if not impossible, to state when the change in malignancy takes place. This change is a gradual one. Clinically, the most striking manifestation is the appearance of a continuous and progressive gastric disturbance in an individual whose previous dyspepsia has been periodic. Furthermore, where previously there was abdominal discomfort and spells frequently relieved by food or medicines, one observes food aggravation, persistent night pain, delayed vomiting, occult blood in the stools, diarrhea, anorexia, loss of weight steadily maintained, sallow and scaly skin, etc. When constant pain, vomiting or diarrhea are suffered early, they often serve a useful purpose because such patients consult their physician early. Unfortunately, they are often late symptoms of the disease. Vomitus in that stage is usually more abundant than in the ulcer period. The odor of the vomitus is changed; instead of having a sour or yeasty odor as before, when malignancy is established, the odor is frequently rancid and pungent. Usually, it has a "coffee-colored" appearance.

4th, in cancer developing in patients without clean-cut gastric ulcer history, but having complained of periods of gastric disturbance of irregular clinical type, we find that the most important symptom in the history of these patients is that the gastric disturbances lost their character of periodicity to assume a continued type.

5th, Cancer occurring in previously normal gastric health. The most salient characteristic is continuous dyspepsia in an individual, of the so-called cancer age, to whom the gastric disturbance is foreign. It is usually characterized by anorexia, loss of weight, pain in the epigastrium, vomiting, hemorrhage, and diarrhea, etc. While it is possible to associate many of these symptoms with benign disorders, the professional mental attitude is seriously delinquent which does not regard all continued gastric malfunctions in individuals past the age of forty, as malignant or potentially so, until they have been definitely proven to be benign. In the early beginning of the disease the symptom-complex resembles very much the one of gastric ulcer, with the difference that it is of the progressive type, and that to the clinical syndrome are added early manifestations of a malignant systemic poisoning. The onset is

usually never very acute, the transition from complete gastric well-being taking place gradually. Aversion to certain kinds of foods, of beverages, is often an early manifestation. Eructations of rather disagreeable taste, some abdominal distension, are often noticed; unexplainable nausea is often complained of. Sometimes, however, vomiting and hemorrhages may be the first symptoms. When once the gastric cancer is well established, the symptomatology does not differ in any way from the other forms of cancer of the stomach.

In conclusion we may say that clinically the symptoms of gastric ulcer do not differ very much from the ones seen in an incipient gastric carcinoma, the only form in which we are concerned in our present paper because usually when the diagnosis is no longer clinically doubtful the case is beyond hope. The real outstanding difference between cancer and ulcer lies in the fact that cancer assumes from the beginning a character of continuity, which does not exist in gastric ulcer.

Information obtained by palpation is too often disquieting, because when a tumor is felt it is usually too late. Palpation of the abdomen must be done after complete cleaning out of the stomach and bowels. A carefully conducted palpation of the epigastrium may reveal the presence of a tumor; in many instances, however, it is negative. The most frequent and to a certain extent the most reliable symptom is pain caused by deep palpation, especially if there is a gastric ulcer present. If there has been recent hemorrhage the pain may be quite marked.

Stomach lavages are helpful in giving the index of gastric hyperacidity, otherwise they have no special diagnostic value so far as incipient cancer of the stomach is concerned.

X-rays are very valuable in giving a proof as to the presence of an ulcer, be it benign or malignant. They are unable to differentiate, however, between a beginning malignancy and gastric ulcer.

#### CONCLUSIONS

While much may be expected from the medical treatment of gastric ulcer in competent hands, it is a fact that the great majority of gastric ulcers are allowed to become hopeless before they are submitted to surgical treatment. To wait until the so-called clinical picture of gastric cancer appears, is practically equivalent to signing the patient's death certificate. From what we have said, it is quite evident that the early diagnosis of gastric cancer concerns itself with the recognition of chronic callous peptic ulcer, especially of the recurrent type. If we have to deal with such a case, if the gastric disturbances show a tendency to affect the continuous type, instead of being periodic, if the patient is at the "cancer-age," there should be no hesitation to advise laparotomy. Exploratory laparotomy ought to be



resorted to in all doubtful cases. If a gastric ulcer is found to be present, resection of the ulcer, if possible, will be the method of choice. If well-localized cancer, freely mobile, is encountered the partial gastrectomy ought to be resorted to.

The work of the surgeon and of the pathologist has shown that the cases of gastric cancer which are cured or given any considerable lease of life are those where such early diagnosis of malignancy has been made as to permit of the resection of the neoplasm while it is still a localized process.

## NEWS NOTES OF OHIO

*New Washington*—Dr. W. W. Lucas of this village is engaged in post-graduate study at the Manhattan Eye, Ear and Throat Hospital, New York.

*Oberlin*—Dr. Thomas J. N. Gatrell, a former resident of Oberlin, died at his home in Santa Ana, California, February 12.

*Crooksville*—Dr. Cyril O. Dozer, son of Dr. E. I. Dozer, has located in Roseville, Muskingum County.

*Cleveland*—Dr. F. C. Waite, professor of histology of Western Reserve University School of Medicine, attended a conference on medical education held under the auspices of the American Medical Association in Chicago, March 1.

*West Cairo*—Dr. Emma Ernsberger has recovered from an attack of influenza with which she was stricken during February while fighting the epidemic, necessitating her removal to a Lima hospital.

*Painesville*—Dr. E. S. Jones has been appointed by the United States Public Health Service as district examiner for the war risk insurance bureau.

*Columbus*—Plans have been drawn for a medical office building to be erected on East State Street, just east of St. Francis Hospital, at an estimated cost of \$250,000. The building will be a four-story fireproof structure containing 80 offices.

*Bucyrus*—In recognition of his service in the Army as a lieutenant during the recent war Dr. W. A. Koch has been rewarded by a captain's commission.

*Washington, C. H.*—Dr. P. E. Decatur has moved from this city to Hamilton, where he has opened offices in the Jefferson Theatre Building for eye, ear, nose and throat work.

*Norwood*—Dr. Charles Saur has been appointed to succeed Dr. Charles A. Neal, who resigned as physician to the Hamilton County Home.

*Dover*—Dr. S. B. McGuire, former state senator from the 18-19 district, is being urged by his friends to run for the Democratic nomination for Congress.

*Port Clinton*—Dr. A. A. Brindley, a member of the staff of Pool Hospital, is the newly ap-

pointed district examiner for Ottawa County under the War Risk Insurance Act.

*Columbus*—Mrs. Frances Scofield Rarey, wife of Dr. Frank S. Rarey, died at her home here, February 23.

*Jamestown*—Dr. L. M. Jones sustained a broken nose and severe bruises about the face when he fell enroute to the home of a patient.

*Waynesfield*—Dr. J. M. Day, for many years a practicing physician in this village, has moved to Lansing, Michigan. Dr. Day recently returned from two years' military service.

*Millersburg*—Dr. Cyrus Luke, a native of Holmes County, died at his home in Wadsworth, Illinois, January 16, from cerebral hemorrhage.

*Columbus*—Speakers before the March 11 meeting of the General Practitioners Medical Society were Drs. W. L. Dick and A. C. Wolfe, who spoke on "Quarantine of Contagious Diseases" and "What the General Practitioner Should Know about the Ear," respectively.

*Kenton*—Dr. Daniel H. Bowman has been appointed district health examiner for Hardin County by the War Risk Insurance Bureau.

*West Mansfield*—Dr. H. A. Skidmore, who moved from this city to Columbus last fall, has resumed practice here.

*Salem*—Physicians of this city have announced a revision of their fee schedule providing a fee of \$1.50 for office consultation; \$3.00 for day visits, and \$4.00 for night visits.

*Kings Mills*—Dr. Henry M. Brown, a former practitioner of New Vienna, has located here.

*Cincinnati*—Funeral services for Mrs. Edith Forcheimer, widow of Dr. Frederick Forcheimer, were held in Mt. Auburn, March 6.

*Salem*—Dr. J. M. McGeorge has been elected exalted ruler of Salem lodge No. 305 B. P. O. Elks.

*Columbus*—Thieves were active in the offices of local physicians on the evening of March 5. The office of Dr. J. W. Albritain was relieved of narcotics and that of Dr. E. H. Ryan of medical instruments valued at \$100.

*Cincinnati*—Dr. Samuel Iglauer of this city presided at the business sessions of the Middle Section of the American Laryngological Rhinological and Otological Society held at the Hotel Gibson, February 21.

*Dayton*—Dr. L. A. Thompson, for the last four years surgeon at the Central Branch, National Military Home Hospital, Dayton, has been appointed governor and surgeon at Hampton (Virginia) Soldiers Home.

## If You Wish to Nap in Toledo, Don't Be Caught Napping Now—Make Reservations Early

**A** SURVEY of the Toledo hotel situation shows that accommodations are adequate and that visitors to the Annual Meeting on June 1, 2 and 3 can be properly cared for if they will make reservations in advance. No other conventions now scheduled for Toledo conflict with the dates of the State Association meeting and hotels are in a position to place their facilities at the disposal of the doctors.

For the convenience of members who expect to attend, a list of the leading hotels and their standard rates (European plan) is presented below. These hotels are centrally located and the majority of them are within easy walking distance of the Y. M. C. A. building which will be used as convention headquarters. Assurance is given by the managers that the rates quoted will be adhered to and that reservations made in advance will be strictly honored. Requests for accommodations should be sent directly to the hotels as early as possible.

### WALDORF HOTEL

#### Rooms with Bath

One Person.....	\$2.00 to \$3.50
Two Persons.....	\$3.50 to \$5.00

### SECOR HOTEL

#### Rooms with Bath

One Person.....	\$3.00 to \$5.00
Two Persons.....	\$5.00 to \$8.00

### BOODY HOTEL

#### Rooms without Bath

One Person.....	\$1.50
Two Persons.....	\$3.00

#### Rooms with Bath

One Person.....	\$2.00, \$2.50, \$3.00
Two Persons.....	\$4.00, \$5.00, \$6.00

### TOLEDO HOTEL

#### Rooms without Bath

One Person.....	\$1.50
Two Persons.....	\$2.50 to \$4.00

#### Rooms with Bath

One Person.....	\$2.50
Two Persons.....	\$4.00 to \$5.00

### NAVARRE HOTEL

#### Rooms without Bath

One Person.....	\$1.50
Two Persons.....	\$2.50

#### Rooms with Bath

One Person.....	\$2.00
Two Persons.....	\$3.50

### MADISON HOTEL

#### Rooms without Bath

One Person.....	\$1.50
Two Persons.....	\$2.50

#### Rooms with Bath

One Person.....	\$2.00
Two Persons.....	\$3.50

### ST. CLAIR HOTEL

#### Rooms with Bath

One Person.....	\$2.00 to \$3.50
Two Persons.....	\$3.00 to \$5.00

### JEFFERSON HOTEL

#### Rooms without Bath

One Person.....	\$1.50
Two Persons.....	\$2.50

#### Rooms with Bath

One Person.....	\$2.50
Two Persons.....	\$3.00 to \$5.00



## MEETINGS OF THE CLEVELAND ACADEMY OF MEDICINE

(Lester Taylor, M. D., Secretary)

The 159 regular meeting of the Academy was held February 20, with President R. H. Birge in the chair. In the absence of the secretary, Dr. C. L. Cummer was appointed secretary pro tem. Attendance 47.

Dr. B. E. Sager presented a case of a new growth in the anterior thoracic wall, surrounded by an area of marked induration, which he had been treating by a light method. Pathological examination had shown a suggestion of sarcoma.

Dr. Carl A. Hedblom of the Mayo Clinic presented an excellent paper on "The Treatment of Chronic Empyema," profusely illustrated with lantern slides, largely tables and X-rays of the chest. Three months was taken as the minimum period of time in making a classification of chronicity. One case had had a cavity of 33 years' duration. Altogether 120 cases were reported. The total mortality was 3.3%. Treatment had been, either by Dakin solution, decortication of the long resection of the ribs followed by plastic operations or by a combination of these methods. Discussion was entered into by Drs. C. A. Hamann, F. C. Herrick and R. H. Birge, and closed by Dr. Hedblom.

The committee consisting of Drs. G. E. Follansbee, R. K. Updegraff and C. L. Cummer, which was authorized to consider the question of employing an executive secretary and which reported at the January meeting of the Academy, formulated amendments to the constitution necessary to make this change. The amendments, which were presented at the recent Council meeting and approved, have been distributed for consideration by members before definite action is taken by the Academy.

### COUNCIL MEETINGS

Council of the Academy of Medicine met February 10 at the University Club. The following members were present: Drs. R. H. Birge, president, Berkes, Chamberlain, Cummer, Dexter, Hanzlik, Lenhart, Marine, Oakley, Sanford, Stone, Taylor and Thomas.

Drs. L. R. Brigman, Carl J. Wiggers, Guy H. Williams, Lorne A. Yule, Henry O. Feiss, Leo R. Gaddis, Karl H. Chandler and E. E. Wolfe, were elected to active membership. The transfer of Dr. Clara Davis from the Ingham County Medical Society to the Cleveland Academy was approved on motion. The resignations of James P. Boyd and I. C. Carlisle were accepted.

Dr. C. W. Stone presented a request from the Welfare Federation Board for two members of the Academy to act with that body. A motion authorizing the appointment of two such mem-

bers by the president was carried and the chair appointed Drs. C. W. Stone and C. H. Lenhart.

Dr. Stone also presented a request from the committee of Civic Organization for the appointment of four members to represent the Academy in consideration of the City Manager Plan. A motion authorizing the appointment of these men was carried and amended to make them include the chairman of the Civic Committee. The committee appointed consisted of: Drs. Maschke, H. L. Sanford, J. J. Thomas and C. W. Stone.

In the absence of the Chairman, Dr. Follansbee, Dr. Cummer reported for the committee on the procuring of an Executive Secretary. The questionnaire sent out by the committee showed that over 70% of the membership were unreservedly in favor of such a move; 20% were in favor with certain reservations and 8% were opposed. Amendments to the constitution, necessary for such a move, were submitted by the committee. After discussion and revision, Council approved the report and referred it to the Academy for consideration.

A request from Mrs. Dietrick, inspector for the State Medical Board, for a committee to co-operate with her in her work of prosecuting illegal practitioners was referred to the Legislative Committee.

The Milk Commission for the ensuing year was appointed consisting of: Drs. J. J. Thomas, Gers-tenberger, John Philips and S. W. Kelly.

At the Council meeting of March 9 the Membership Committee submitted the following applicants: Drs. Russell B. Crawford, W. S. Chamberlain, E. D. Dowds, Allen Graham, M. W. King, Sidney Littman, Max Maner, Bernard H. Nichols, George H. Reeve, Paul M. Spurney, Arthur L. Stotter, Harold P. Timberlake and J. J. Young. Dr. Geo. Logan of Akron was reinstated as a non-resident member on payment of back dues, minus dues for the time spent in the Military Service.

The following were approved as members of the Membership Committee: Drs. K. S. West, E. F. Kieger, N. L. Coy and I. M. Jarzynski.

Dr. Birge reported for the Legislative Committee that Dr. Jenkins had been appointed to work with Mrs. Dietrick in the prosecution of illegal practitioners. It was the sense of the Council that Academy members should support her whenever possible and post themselves on the judges, who allow these cases to escape a fair trial.

A letter from Dr. R. L. Allen dealing with a case of unethical advertising was discussed and it was decided that the case in point, which consisted of a personal letter to a manufacturing concern soliciting its accident work, was not unethical.

The program committee was authorized to provide for the presentation before the Academy of the question of the proposed bond (\$2,000,-000.00) issue for the City Hospital.

Mr. Selzer reported the result of his investigation of the alleged over-charging by the druggists. He showed the necessity for a large increase in price in many cases and requested specific charges. He registered a protest against the present law, which requires a \$25.00 tax to fill alcoholic prescriptions made out according to law.

The Department of Public Welfare—Division of Health, presented a request for a representative of the Academy on their advisory committee for the control of venereal diseases, and Dr. H. L. Sanford was appointed.

In response to a request from the health department, the secretary was authorized to send out a circular letter to all members to endeavor to locate in each precinct two or three physicians, who could be called on for night calls to pay cases. This request is the result of the unwillingness of many men to make calls at night or to visit people whom they do not know, forcing patients to call the City physician.

The following were nominated for delegates and alternates to the State Association meeting and the secretary was authorized to cast an unanimous ballot for their election: Delegates—G. E. Follansbee, H. A. Berkes, C. W. Stone, J. E. Tuckerman, C. L. McDonald, R. H. Birge. Alternates—A. A. Jenkins, G. H. Lewis, T. C. Young, K. E. Ochs, S. C. Lind, C. H. Lenhart.

Resolutions of regret at the death of Dr. Donald Hoover were directed to Dr. C. F. Hoover, uncle of the deceased.

portance of getting an accurate history from the patient and allowing him to tell his own story without being led. He discussed the gall bladder, perforating, gastric and duodenal ulcers, acute pancreatitis, appendicitis, ectopic pregnancy and intussusception and declared that every modern resource should be exhausted before diagnosis is made.

Dr. Bowers also outlined the cancer campaign which is under the direction of the State Committee on Control of Cancer. Dr. Bowers is supervisor of six counties engaged in the campaign and has chosen Dr. A. F. Sarver as his lieutenant in Darke County.

In his paper on "The Treatment of Tuberculosis," Dr. Rockhill stated that 100% of individuals react to tuberculin after reaching the age of 15. He believes that primarily in all cases the implantation is at the hilus, traveling upward to the apex. In his opinion drugs are good only for symptoms, and rest, air, good food and peace of mind are essential. Dr. Rockhill advocated the home sanatorium treatment of tuberculosis and expressed the belief that the patient's chances for recovery are equally good at home as in the western states.—B. F. Metcalfe, Correspondent.

Greene County Medical Society's meeting of March 4 was featured by a symposium on influenza. Drs. R. H. Grube, H. C. Messenger, W. A. Galloway and C. G. McPherson of Xenia; M. I. Marsh and J. O. Stewart of Cedarville; L. L. Taylor and William Hartinger of Yellow Springs participated.—News Clipping.

Montgomery County Medical Society held its regular meeting in the auditorium of the Fidelity Medical Building, February 20. Dr. Martin H. Fischer of Cincinnati was the speaker of the evening, his subject being "The Heart."

Before the meeting of March 5 Dr. F. I. Shroyer spoke on "Infections of the Uterus and Cervix and Their Treatments."

### THIRD DISTRICT

Allen County Medical Society, in session at Lima March 2, enjoyed an excellent paper by Dr. J. R. Tillotson on "Superficial Nerve Injuries," explaining in detail some of the injuries to the nerve supply of the arm, forearm and head received by soldiers in the late war, together with their diagnosis and surgical treatment. Discussion was opened by Dr. Vorbau of the Lima State Hospital.—A. S. Rudy, Correspondent.

Auglaize County Medical Society met at Minster on the evening of March 3. After the election of officers, at which Drs. W. S. Stuckey and C. L. Mueller of Wapakoneta were re-elected as president and secretary-treasurer, respectively, Dr. C. A. Coleman of Dayton gave a talk on the subject of "The Kidneys." A revised fee schedule providing fees proportionate to those in effect in other counties was adopted.—News Clipping.

## COUNTY SOCIETIES

### FIRST DISTRICT

Fayette County Medical Society met in regular session at Washington C. H. on March 2. After supper at the Cherry Hotel the members and guests repaired to the Y. M. C. A. for the business and scientific session. An address by the president, Dr. Howard Stitt, was followed by a talk by Dr. Robert Carothers of Cincinnati, councilor of the First District, on the welfare of the society. Dr. J. Louis Ransohoff of Cincinnati spoke on "Cancer" and the campaign undertaken by the Committee on Control of Cancer of the State Association. An increase in fees was considered and a committee appointed to confer with individual members of the society concerning the matter.—Lucy W. Pine, Secretary.

### SECOND DISTRICT

Darke County Medical Society, meeting in Greenville on March 11, had as its guest Drs. L. G. Bowers of Dayton and C. S. Rockhill of Cincinnati. Dr. Bowers spoke on "The Diagnosis in the Acute Abdomen," emphasizing the im-



## FOURTH DISTRICT

*Ottawa County Medical Society* held a well attended meeting in Oak Harbor on March 11. Dr. C. B. Pinefrock, the new county health commissioner, outlined the plans of the health department and requested the co-operation of the physicians in making health administration effective. Dr. R. P. Daniels of Toledo gave an interesting address on the subject of school inspection, which was participated in by all present. A movement will be started at once to conduct a thorough examination of all schools in the county.—S. T. Dromgold, Secretary.

## FIFTH DISTRICT

*Lake County Medical Society* met at the Parmly Hotel, Painesville, March 1 for its 129 regular meeting. At 7:30 supper was served and at 8:30 the society adjourned to the parlors where Dr. J. L. Bubis of Cleveland gave a practical and interesting talk on "The Intermedian Operation," illustrating every step with stereopticon slides. Dr. P. A. Jacobs of Cleveland spoke on "Diseases of the Bladder, Medical and Surgical Treatment," illustrating with stereopticon views. A general discussion followed each paper. The next meeting is scheduled for April 5, when the subject of discussion will be "Cancer."—E. S. Jones, Secretary.

*Lorain County Medical Society* held its monthly meeting in Lorain on March 9. With a view to getting the most out of our meetings we have our business transactions first, then banquet, and after we have had our fill we enjoy our program. Dr. J. J. Kurlander, assistant orthopedist at Mt. Sinai Hospital, Cleveland, read a splendid paper on "Tuberculosis of the Knee Joint," which was followed by thorough discussion.—R. A. Pease, Secretary.

## SIXTH DISTRICT

*Portage County Medical Society's* March meeting was held at the home of Dr. W. C. Ramsey, Kent, with a large attendance. Dr. Norton of the Mason Rubber Company was elected to membership. Activities of the county health board were discussed and commented on favorably. Dr.

J. H. Krape read a paper on "The Symptoms and Treatment of Pneumonia," a timely subject which was given thorough discussion, revealing considerable difference of opinion on the question of local applications.—W. B. Andrews, Secretary Pro Tem.

*Stark County Medical Society's* program for March 16 included three interesting papers. Dr. C. E. Abell of Canton spoke on "Importance of Early and Adequate Drainage of Middle Ear Infections: "Dr. H. G. Scranton of Alliance on "Experiences in the Field with the A. E. F.," and Dr. L. T. Mutschmann of Alliance on "Empyema."—Program.

## EIGHTH DISTRICT

*Fairfield County Medical Society*, in session at Lancaster on February 18, installed the following new officers for 1920: President, J. H. Axline; vice-president, F. B. Atkinson; secretary-treasurer, C. H. Hamilton; delegate, H. M. Hazelton. The paper of the evening was read by Dr. Ralph Smith, the subject being "The Value of Blood Examination in Diagnosis."—C. H. Hamilton, Secretary.

*Muskingum County Medical Society* held its regular monthly meeting at Zanesville on March 3. Dr. H. M. Brundage of Columbus, the guest of the evening, read a paper on "Diabetes Mellitus."—Program.

## NINTH DISTRICT

*Lawrence County Medical Society* cancelled its meeting of March 4 because of the influenza epidemic.—E. E. Ellsworth, Secretary.

## TENTH DISTRICT

*Ross County Medical Society* met in regular session at Chillicothe on March 2. The meeting was well attended and enthusiastic. Dr. H. R. Brown read an interesting paper dealing with his experiences in the German prison camp at Fort Oglethorpe. Resolutions of regret on the death of Dr. J. M. Wiltshire, one of the oldest practitioners in the county, were adopted. The scientific program for the year's meetings was announced. Dr. George C. Schaeffer of Columbus will be the essayist for the April meeting.—G. S. Mytinger, Secretary.

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# MEDICAL COMMENT    ✂   ✂   ABSTRACTS AND CURRENT TOPICS OF INTEREST

**T**HE PUBLICATION COMMITTEE IS MORE THAN ANXIOUS TO MEET THE NEEDS OF THE JOURNAL'S READERS. IN CONSEQUENCE THE MEDICAL EDITOR IS INITIATING A NEW DEPARTMENT TO BE DEVOTED TO MEDICAL COMMENT, ABSTRACTS, AND CURRENT TOPICS OF INTEREST TO THE GENERAL PRACTITIONER. THE EDITORIAL POLICY OF THIS NEW DEPARTMENT WILL BE ONE OF SERVICE AND SUGGESTIONS AND CONTRIBUTIONS WILL BE GRATEFULLY RECEIVED.—MCM.

## Lethargic Encephalitis.

**T**HE ATTENTION of health officers is invited to the following instructive description of a new epidemic disease recently observed in Europe. It is desirable to know whether any such cases have been observed in this country, and if so, to what extent the disease prevails.

At a meeting of the Vienna psychiatric society, held April, 1917, Von Economo described a group of cases of a disease occurring in epidemic form to which he gave the name *encephalitis lethargica*. A discussion concerning the same disorder was held the following month by the Paris Academy of Medicine, and Prof. Netter there expressed the opinion that the disease was not a form of acute poliomyelitis. He also quoted some evidence in support of the view that the disease occurred at the end of the seventeenth and beginning of the eighteenth century in Germany and more definite evidence that it occurred in Upper Italy and Hungary in 1890. Very suggestive cases occurred in nearly all the countries of Europe and in the United States in the spring of 1895. From the data presented by Von Economo it is evident that the disease occurred in Vienna in the winter of 1916-17.

The first case noted in England occurred February 11, 1918, in Bermondsey, and the largest number of cases in one week was 18, in the last week in April. The number of cases declined thereafter, and the epidemic, which never attained large proportions, came, at least temporarily, to an end in June.

The disease has been made notifiable in England and Wales under the name of *lethargic encephalitis*. Early last year the local government board, with the assistance of the Medical Research Committee, instituted clinical and pathological investigations. The result of these have now been published in a report (N. S. 121) issued by H. M. Stationery Office, London.

The following data are abstracted from a review of the Government report, published in a recent number of the British Medical Journal, to which acknowledgements are hereby extended.

The disease is an acute affection due to a specific virus, which, like that of acute anterior poliomyelitis, probably finds entrance through the naso-pharynx, and which, like it, has a special affinity for the nervous system, though for different areas and elements.

*Pathologically*, lethargic encephalitis belongs to

the class of polio-encephalitic diseases which are inflammatory in nature. Bacteriological investigations did not yield any positive results.

*Clinically* the disease is a general infectious disease characterized by manifestations originating in the central nervous system, of which the most frequent and characteristic are progressive lethargy or stupor and lesion in or about the nuclei of the third pair of cranial nerves. Although a rise in temperature was not observed in all the 164 cases of the disease of which notes were obtained, there seems to be little doubt that there is always a certain amount of fever in an early stage, although occasionally it may not be observed for several days after the onset of symptoms. The common range is between 101° F. and 102° F., but temperatures up to 104° F. are not very uncommon, and in a few cases a temperature between 104° F. and 105° F. has been reached. The pyrexia usually lasts from 2 to 5 days, but may continue for 10 or even 14. It may fall suddenly or gradually with oscillations. A period of subnormal temperature not infrequently follows.

In the majority of cases a prodromal period may be recognized, but it is not very well defined, the symptoms being the early stage of those of the developed disease. Usually the first symptom is simple catarrhal conjunctivitis and in a smaller number of cases tonsillitis, simple sore throat, and bronchial catarrhs were observed, but the salient symptoms observed in 80 per cent of the cases at this stage was progressive lethargy. It might be ushered in suddenly by a fainting attack or fit, but the onset was more often gradual. The patient became dazed or stupid, slept a great deal, and was drowsy by day. In marked cases the lethargy was accompanied by heaviness of the eyelids, pain in the eyes, blurred vision, and photophobia, and, in a well-marked case, gradually passed into stupor. Headache was common, and giddiness was a highly characteristic early symptom, and in some cases was accompanied by diplopia. Mental hebetude was often associated with a highly emotional state, and the patient might exhibit, without apparent cause, symptoms which might be labeled hysterical. In other instances the mental depression was so great that melancholia was suspected. In a few cases only was the patient restless and irritable. The patient may be indisposed to speak, sometimes has distinct difficulty in articulation. The



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most frequent and characteristic signs in the prodromal period may be summed up as lethargy, asthenia, vertigo, headache, diplopia, and some alteration in the mental state.

**A**FTER this prodromal period, if it occurs, the symptoms of a general infectious disease become manifest; the febrile reaction has already been mentioned. The patient lies in bed on the back, often unable to make any voluntary movement on account of great muscular weakness; the face is quite expressionless and masklike, and there may be definite double facial paralysis. The severest cases lie like a log in bed, resembling a waxen image in the lack of expression and mobility, and this may be accompanied by catalepsy. The patient is in a condition of stupor, although true sleep is often not obtained. Delirium, usually nocturnal, is not uncommon, and in addition to the muscular trouble there is distinct rigidity in a considerable proportion of cases. The voice becomes nasal and monotonous, sentences are uttered very slowly and words slurred into one another. Occasionally, however, once started to speak the patient chatters sentences with so great rapidity that he is often unintelligible. Irregular nonrhythmic spontaneous movements of the face, trunk, and limbs, resembling those seen in chorea or thalamic infections, are not infrequent. Cases occur which present the general symptoms of the disease—pyrexia, lethargy, asthenia—without localizing signs, and as a rule can only be diagnosed from the general surrounding circumstances. The commonest localizing sign is ophthalmoplegia, recognized in 75 per cent of the cases examined. Ptosis is the commonest form of third nerve paralysis and is usually at some stage bilateral. Finally, paralysis is usually bilateral, or becomes so, but is almost invariably more intense on one side than the other.

Dr. MacNalty recognizes seven types of cases—(a) A clinical affection of the third pair of nerves; (b) affections of the brain stem and bulb, (c) affections of the long tracts, (d) the ataxic type, (e) affections of the cerebral cortex, (f) cases with evidence of spinal cord involvement, and (g) the polyneuritic type in which affection of the peripheral nerves is suspected. The prognosis is better than the alarming state of the patient in the fully developed stage would suggest. Among 168 cases 37 deaths were recorded. The duration of the stupor is very variable; occasionally it lasts two to three days, more often two to five weeks, and in one case, which eventually recovered, it continued for eight weeks. It is too soon to speak positively of after effects, but certain manifestations have persisted after the expiration of three months from the date of onset; these are an alteration in the mental condition, persistent cranial nerve palsy, the appearance of paralysis (apparently of spinal cord origin) and athetosis. The diagnosis may be very difficult, the lethargy and the progressive character of the cranial

nerve paralysis are the most characteristic signs. The frequency of ptosis, paralysis of the ocular muscles, diplopia, facial paralysis, and ocular incoordination are the cranial nerve signs; optic neuritis does not occur save in very occasional cases.

**T**HE most common error in diagnosis is to attribute the condition to tuberculous meningitis; in many cases a differential diagnosis from cerebrospinal meningitis can not be made without an examination of the cerebrospinal fluid, which is little, if at all, altered in the majority of cases of lethargic encephalitis.

Some of the other difficulties encountered have already been mentioned, but the essential difficulty is to separate lethargic encephalitis from the rare cases of the cerebral form of infantile paralysis. The resemblance is very close, and it seems probable that some of the cases reported in the past as cerebrospinal poliomyelitis may have been examples of the disease now newly recognized in this country [England]. Dr. MacNalty has arranged the chief criteria for diagnosis. The main points to be noted seem to be that, though the chief symptoms of lethargic encephalitis have been described in cases reported as cerebral poliomyelitis, they are slight, of much briefer duration, and not so constant; lethargic encephalitis, on the other hand, has a very definite clinical syndrome, characterized by progressive stupor or coma, alternating delirium, headache, giddiness, asthenia, mental and emotional changes, and, in the majority of cases, by paralysis of the third pair of cranial nerves. Paralysis, when present in lethargic encephalitis, is usually bilateral and restricted to cranial nerves, but has commonly cleared completely or is less in degree two months after recovery. In these respects it presents a marked contrast to acute poliomyelitis.

often difficult to overcome, except by enemata, followed by such drugs as liquid paraffin or phenolphthalein. No hypnotics and no morphine or other preparation of opium should be given, and Dr. MacNalty deprecates the administration of hexamine in large and repeated doses; if it is prescribed the urine should be carefully watched for albumin. Daily cleansing of the mouth and antiseptic treatment of the nose and mouth should be carried out, and respiratory complications systematically looked for.

**W**ITH regard to treatment, no specific method has been devised, and the best that can be done is to put the patient to bed and provide him with good nursing; cold sponging is often beneficial during the pyrexial period and tends to diminish the delirium. In many instances transient or permanent relief, with diminution of stupor, followed the withdrawal of cerebrospinal fluid by lumbar puncture, especially when the fluid was under pressure. For the pain, numbness, and tingling of the limbs warmth is the best remedy, and the bedclothes should be raised on frames. Constipation is obstinate and





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## Ohio Wages Vigorous and Effective Fight Against Trachoma with Assistance of National Health Service

The prevalence of trachoma in Ohio has been revealed by recent surveys made by the state department of health, in co-operation with the United States public health service and local health organizations, with a fund of \$20,000 which became available in July, 1919, by act of the legislature. Trachoma was first made reportable in 1912. From that time to the end of 1918, 2,037 cases were reported. Such reports came mainly from the large cities, where measures were being taken to discover and prevent the disease, whereas it is well known that trachoma is a rural rather than an urban disease.

In 1914, information was received pointing to the prevalence of the disease among the employees of the Youngstown Sheet & Tube Company at East Youngstown. A survey of the employees of this company revealed the following:

Number of employees examined.....	5,692
Number of cases of trachoma.....	76
Percentage of employees affected.....	1.3%
Number of suspicious cases.....	19

In 1917, a questionnaire concerning trachoma was sent to all oculists listed in Ohio by the American Medical Directory. Replies were received from 130 oculists in 59 counties. These men reported that they had treated 1,039 cases

during the five years ending December, 1916. Of these 911 had suffered damage to vision. This shows clearly that the specialist sees only cases which are of sufficiently long standing to result in pannus, corneal ulcer, entropion or some of the less frequent complications of trachoma. The answers to this questionnaire emphasize that if trachoma is to be discovered at an early stage, when treatment is most effectual, the patient must be sought—must not be permitted to go without treatment until he seeks relief.

In 1917, a partial survey of the rural school children of five counties was planned. The counties selected were, Belmont, Butler, Erie, Muskingum and Pike. In all 6,306 rural school children were examined by physicians instructed by Surgeon John McMullen of the United States Public Health Service, in the diagnosis of trachoma. Fifty-three cases were found, which is less than one per cent. of those examined. In Pike county the percentage was 3.2, and in Belmont, slightly over one. In Butler and Erie counties only a few cases were found, but in Muskingum county, while typical cases were few, 100 suspected cases were discovered. This superficial survey gave valuable indications of where to look for foci of the disease.

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During 1919, surveys were held in Scioto and Ross counties, and in the city of Hamilton, all school children at these places being examined.

#### SCIOTO COUNTY

Persons examined .....	10,741
Trachoma cases found .....	224
Percentage .....	2.1%
Suspicious cases found .....	87
Cases operated .....	156

#### ROSS COUNTY

Persons examined .....	6,738
Trachoma cases found .....	70
Percentage .....	1.04%
Suspicious cases .....	84
Cases operated .....	40

In the city of Hamilton, about 5000 persons were examined and 117 cases found, of which 64 were operated upon.

The following table gives the final figures on the complete survey of Butler county finished in March, and clinics held in various parts of the county. The cases found include 15 from Franklin, Warren county, of which 14 attended the clinic at Middletown and were operated.

#### BUTLER COUNTY

Persons examined .....	14,628
Trachoma cases found .....	224
Percentage of trachoma present .....	1.5%
Suspicious cases .....	187
Cases operated .....	132
Persons given other treatment .....	263

All clinics are conducted by Surgeon John McMullen of the United States Public Health Service, assisted by local authorities and the State Department of Health. The notable feature of the Middletown clinic, which was held on March 2 and 3, was the large attendance of local physicians and several from other cities, including Drs. W. H. Peters, Cincinnati health commissioner; A. O. Peters, Dayton health commissioner; Edward Blair, Warren county health commissioner; K. R. Teachnor, Butler county health commissioner, and G. D. Lummis, president of the Ohio Public Health Council, and health commissioner of Middletown.

Cincinnati is the first large city to benefit by the anti-trachoma campaign. A survey was started in that city on March 23, under the personal direction of Dr. McMullen, with the assistance of Dr. Louis Stricker, consulting oculist to local schools; Dr. Oscar M. Craven, chief medical inspector of Cincinnati; the district physicians and school nurses, and the State Department of Health.

In order that the State Department of Health may offer thorough co-operation to the United States Public Health Service in this important work, Dr. Frank G. Boudreau, director of the Division of Communicable Diseases, has organized in his division a bureau of trachoma, which is under the direction of Dr. Robert Lockhart.

Future plans for the campaign against tra-

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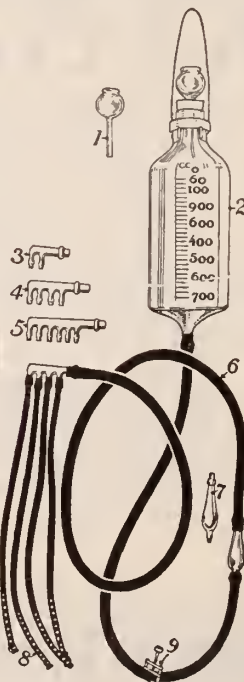
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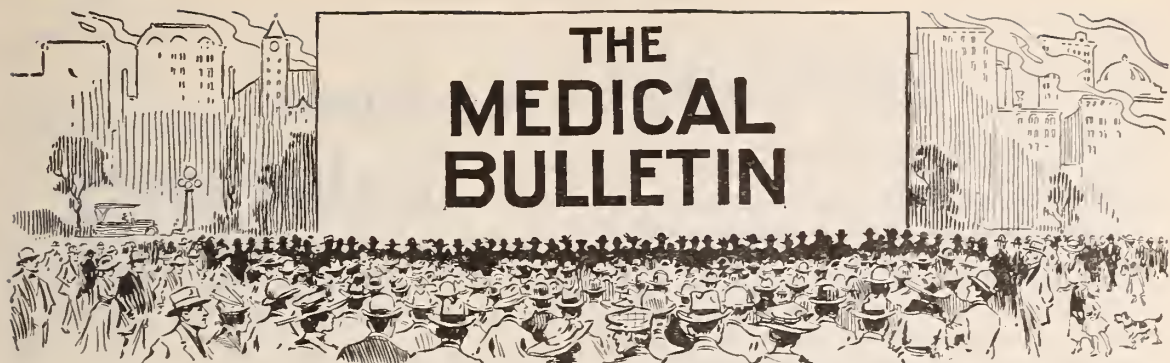
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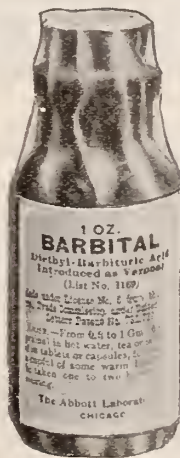
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choma provide for the establishment of a trachoma hospital in co-operation with the United States Public Health Service; surveys of school children, employes of plants and other groups over the entire state, but principally in rural districts, and the holding of clinics for the treatment of cases wherever the need is shown.

It is believed that with co-operation between the National Health Service, the efficient personnel of the State Department, local health agencies, oculists in private practice, and the profession at large, the trachoma problem in Ohio can be solved in the course of a few years.

In the scientific pages of this issue Dr. Lockhart presents an article on "Trachoma, Its Diagnosis and Treatment," which should be helpful in acquainting the general practitioner with the symptoms and diagnosis of this disease, and the technique developed by Dr. McMullen for its treatment.

#### CONFERENCE OF INDUSTRIAL PHYSICIANS AND SURGEONS

The Pennsylvania Department of Labor and Industry held its Tenth Conference of Industrial Physicians and Surgeons at Harrisburg on March 25. The conference was of unusual interest as it occupied the final day of a four-day safety congress held by the department in which speakers of international prominence participated. Speakers before the Conference were: Drs. C. D. Selby, Toledo; Harry E. Mock, Chicago; Judson C. Fisher, C. E. Ford, New York; William E. Robertson, Alfred Stengel, Philadelphia; Irvin Clark, Worcester, Massachusetts, and Frederick Hoffman, Newark, N. J. Dr. Selby's subject was "Plant Dispensaries and Their Equipment," and Dr. Ford, former Cleveland health commissioner, spoke on "Health Education in Industry."

In commenting on the extensive military service of Dr. W. H. Henry of Hamden, in the February issue, it was stated that he was the only Ohio physician to serve with American forces in northern Russia in the first half of 1919. The fact has been brought to our attention that Dr. Ralph Edgar Powers of Akron died in Archangel in January, 1919, of wounds received in action with the American forces against the Bolsheviks.

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## DEATHS IN OHIO

*William King Rogers, M. D.*, New York University Medical College, 1889; aged 57; died at Mount Carmel Hospital, Columbus, February 27, from blood poisoning, following the injection of a vaccine to prevent influenza. After an internship at St. Luke's Hospital, New York, and post-graduate work in Vienna and London, Dr. Rogers entered practice in Columbus in 1893. In 1895, he became professor of ophthalmology and otology at Starling Medical College, and in 1900 was made professor of otology, which chair he held until 1916, two years after the college had merged with Ohio State University. His connections with medical bodies were numerous, including fellowship in the American Academy of Ophthalmology and Oto-Laryngology, the American College of Surgeons and the American Medical Association; and membership in the American Ophthalmological Society, the American Otological Society, and the Ohio State Medical Association. Dr. Rogers was ex-president of the Ohio State Board for Relief and Benefit of the Needy Blind, and at the time of his death was a member of the staffs of Mount Carmel, St.

Francis and Children's Hospitals. He maintained offices with his brother-in-law, Dr. C. F. Clark, and Dr. I. G. Clark. He leaves a widow, one daughter, mother and two brothers, one of whom is Dr. Andrews Rogers of Columbus.

*Thurman Ross Beaver, M. D.*, Indiana University School of Medicine, Bloomington-Indianapolis, 1910; aged 32; died at his home in Akron, recently, from pneumonia following influenza. Dr. Beaver received a lieutenant's commission in the first officers' training camp at Fort Benjamin Harrison, and served overseas with the 86th Division. His widow, mother and two sisters survive.

*Abraham Markle Blackburn, M. D.*, Medical College of Ohio, Cincinnati, 1864; aged 78; died at his home in Steubenville, March 5. He was a veteran of the Civil War and had practiced in Steubenville for 50 years.

*Hiram M. Day, M. D.*, Western Reserve University School of Medicine, Cleveland, 1881; aged 66; member of the Ohio State Medical Association; died at his home in Delaware, February 2, from heart disease. Dr. Day was a former president of the Delaware County Medical Society. He entered practice at Pandora and continued there until 1902, when he located in Delaware. He leaves his wife, one daughter and two sons.

*Albert Mealey Dunlap, M. D.*, Cleveland College of Physicians and Surgeons, 1905; aged 37;



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died February 10 at the home of a patient in Cleveland, where he was taken ill with pneumonia several days prior. Dr. Dunlap served as a lieutenant in the Medical Corps during the World War, receiving his discharge January 16, 1919. He was a candidate for the office of coroner in Cuyahoga County on two occasions and was physician for the lodges of the Moose and Eagles. Surviving are his widow and mother.

*Charles William Hadley, M. D.*, Ohio State University College of Medicine, Columbus, 1912; aged 36; member of the Ohio State Medical Association; died at his home in Columbus, February 20, following a nine-days' illness from influenza and pneumonia, contracted during overwork in fighting the epidemic. Dr. Hadley had engaged in postgraduate work at Harvard University and at special clinics in New York and Boston. At the time of his death he was an instructor in obstetrics in the medical department of Ohio State University. His widow and mother survive.

*Russell Hathaway, M. D.*, Cleveland University of Medicine and Surgery, 1876; aged 73; died at his home in Wellington, February 27, from neuritis. Dr. Hathaway located in Wellington immediately after graduation and had practiced there continuously until a few months before his

death. He leaves a widow, one son and one daughter.

*William C. Hodges, M. D.*, Columbus Medical College, 1881; Starling Medical College, 1892; aged 62; died at his home in Chesterville, February 15. Dr. Hodges retired six months ago, after more than 25 years' active practice in the village in which he made his home. Surviving are widow and one daughter.

*Donald Hoover, M. D.*, University of Colorado School of Medicine, Boulder-Denver; Western Reserve University School of Medicine; aged 26; died from pneumonia, March 2, at Lakeside Hospital, Cleveland, where he was serving an internship. Dr. Hoover developed pneumonia following influenza, contracted while treating patients suffering with the disease. He was a nephew of Dr. Charles F. Hoover of Cleveland.

*Howard M. Jump, M. D.*, Toledo Medical College, Toledo, 1895; aged 53; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home on Kelley's Island, February 21, from pneumonia which developed after influenza. Dr. Jump was the only physician on the Island and before falling a victim of influenza himself had toiled ceaselessly, night and day, in the care of more than 200 cases of the disease. Dr. Jump formerly practiced in Toledo and Bowling Green, from

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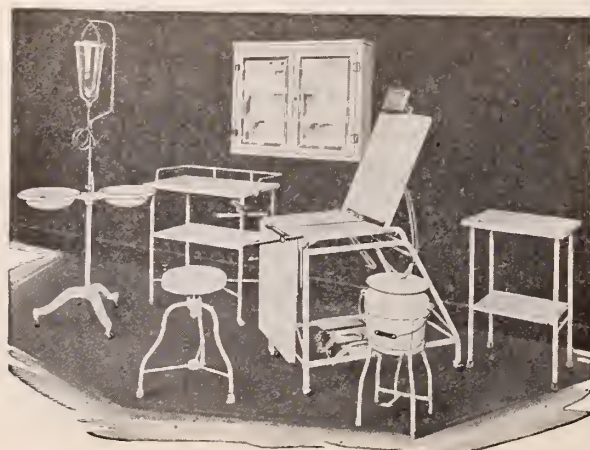
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which city he moved to the Island two years ago. He leaves his wife, mother and one daughter.

*John Carroll McGinnis, M. D.*, Miami Medical College, Cincinnati, 1901; aged 42; member of the Ohio State Medical Association; died in Cincinnati, February 22. Dr. McGinnis' home was in Martins Ferry, where he established a practice on completion of an internship at Deaconess Hospital, Cincinnati, following graduation. He served as a captain in the medical branch of the Army at Camp Hancock during the World War. He is survived by his widow.

*Charles B. Reid, M. D.*, Fort Wayne College of Medicine, 1881; aged 63; former member of the Ohio State Medical Association; died at his home in Van Wert, February 29, as the result of paralysis with which he was stricken six months ago. Dr. Reid was a native of Van Wert, and except for a short period during which he practiced in Dasie, spent practically his entire lifetime there. His widow, one daughter and one son survive.

*William A. Smith, M. D.*, Bellevue Hospital Medical College, New York, 1883; aged 68; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Springfield, February 25, from heart disease. Dr. Smith had practiced in Springfield for 37 years. He is survived by one daughter and one son.

*George W. W. Walker*, Roseville, Ohio, died at his home, February 6, at the age of 73 years.

### Medical Veterans Urged to Form State and Local Organizations

TO ALL PHYSICIANS WHO SERVED THE FEDERAL GOVERNMENT DURING THE WAR:

An association of Medical Veterans of the World War was organized at Atlantic City, in June, 1919. About 2800 physicians have already joined and all others who are eligible are invited to join.

The organization of the society provides for state and local organizations wherever the members desire it, and in some states organizations have already been effected.

The organization of the society is based on democratic principles and it is hoped that the members who have joined will take the initiative and organize their own state and local societies. The national organization will assist by furnishing application blanks and copies of the constitution and by-laws, and, if desired, stationery.

The first thing to be done after the organization of a state society is to elect a councillor to the general council of the organization, to represent the state society at the next annual meeting of the Veterans at New Orleans on the first day of the meeting of the American Medical Association, April 26, 1920.

COLONEL F. F. RUSSELL,  
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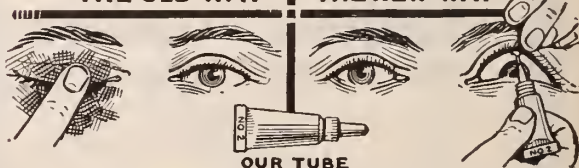
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Via Cincinnati, Louisville, Nashville, Birmingham and Montgomery, on the Louisville and Nashville Railroad.

Via Cincinnati, Louisville and Memphis, on the Illinois Central Railroad.

Via St. Louis on the Missouri Pacific Railroad.

Via Cincinnati to Chattanooga on the Cincinnati, New Orleans and Texas Pacific Railroad; Chattanooga to Meridian on the Alabama Great Southern Railroad; Meridian to New Orleans on the New Orleans and North-eastern Railroad.

but the old metropolis of the South, noted for its unbounded hospitality and historical significance, is sufficient in itself to attract a large attendance from throughout the country.

Activities will center at Tulane University School of Medicine, where the registration, exhibits and several section sessions will be housed in the Josephine Hutchinson Memorial Building. Hotels which have been designated as general and sectional headquarters are:

Practice of Medicine—St. Charles.

Surgery, General and Abdominal—Grunewald.

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Laryngology, Otology and Rhinology—Monteleone.

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Pathology and Physiology—Planters.

Stomatology—Lafayette.

Nervous and Mental Diseases—Lafayette.

Dermatology—De Soto.

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**CONTENTS**  
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**REACTIONS**  
**GONORRHEAL**  
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The early date of the 1920 meeting is of considerable advantage to Ohio physicians in that it allows sufficient interim before the annual meeting of the Ohio State Medical Association in Toledo, June 1, 2 and 3, to enable them to attend both conventions.

It also permits them to take advantage of the reduced railroad rates effective for winter tourist travel, a choice of routes going or returning.

Winter tourist fares from Ohio to New Orleans are in effect daily up to and including April 30, with final return limit of reaching the original starting point prior to midnight May 31. Stop-overs will be granted at all points within final limit of ticket on either the going or return trip, or both, on application to the conductor. Rates and routes from Ohio to New Orleans are listed in the box for your convenience.

#### Former Service Men Receive Medical Attention

During the first three weeks in which the Columbus headquarters of the United States Public Health Service were open for the reception of ex-service men who have claims under the War Risk Insurance Act, or who are in need of medical attention, more than 100 cases were cared for.

All examinations and treatment given by the health service to ex-soldiers and sailors are free. Where operations or dental work are necessary the government also defrays all expenses providing recommendation for the treatment is made by the United States Public Health Service. The medical attention is given without delay, certificates covering the expense being passed by the government after the treatment has been rendered.

Four local hospitals are under contract to take patients sent by the Public Health Service. If injured service men from other cities are summoned to Columbus for examination or treatment their railroad fare and expenses are paid. Vocational students now at Ohio State University are also given free medical attention.

Dr. Starling S. Wilcox is in charge of the office and his assistants are Drs. E. J. Gordon, W. T. Millhon, Guy T. Meek, J. F. Farson and Earl Gaver. Dr. James A. Gould, state supervising neuropsychiatrist, is also connected with the office.

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By ordering in case lots you get our maximum discount.

## PLATES

Size Plates	Dozen in a case			List Price per case			Our Price		
	Seed	Par.	Diag.	Seed	Par.	Diag.	Seed	Par.	Diag.
5 x 7		20			\$28.00			\$23.80	
6½ x 8½		12			25.20			21.42	
8 x 10		10			30.00			25.50	
10 x 12	3	4	6	15.45	20.60	30.90	13.12	17.51	26.27
11 x 14	3	4	4	21.75	29.00	29.00	18.49	24.65	24.65
14 x 17	2	3	3	22.50	33.75	33.75	19.13	28.69	28.69

## DUPLITIZED FILMS

Sizes films	Doz. in a case	List Price per case	Our Price per case
5 x 7	20	\$25.00	\$21.25
6½ x 8½	12	24.00	20.40
8 x 10	10	28.50	24.23
10 x 12	3	13.50	11.48
11 x 14	3	17.25	14.67
14 x 17	2	17.50	14.88

## EASTMAN DENTAL FILMS

	Doz. in package	List Price	Our Price
No. 1	12	\$ 6.00	\$5.10
No. 1A	12	10.20	8.67
No. 1B	12	10.20	8.67
No. 2	6	10.50	8.93

### The New Eastman Improved Packet (Metal Back) Dental Films

Are now available.

Prices are the same as the paper packet quoted above.

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Price per gross.....\$9.00  
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A fine grade of GENUINE METOL.

A pure white in color.

Guaranteed 100% pure.

Not to be confused with substitutes.

Quantity	Price
1 lb. bottles.....	\$15.00
8 oz. bottles.....	7.65
4 oz. bottles.....	4.65
1 oz. bottles.....	1.10

### Orange and Black X-Ray Exposure Envelopes

Furnished in sets of one each.

Price per dozen sets

Sizes	
5 x 7	.....\$ .30
6½ x 8½	..... .45
8 x 10	..... .60
10 x 12	.....\$ .95
11 x 14	..... 1.25
14 x 17	..... 2.25

### Filing Envelopes

Don't use your Orange and Black envelopes for filing. Filing envelopes are cheaper and more desirable. Made of strong manila paper and have a printed form on the outside the same as the orange envelopes.

	Price
5 x 7 per 100.....	\$ .40
6½ x 8½ per 100.....	.48
8 x 10 per 100.....	.55
10 x 12 per 100.....	.75
11 x 14 per 100.....	1.25
14 x 17 per 100.....	1.70

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## OHIO HOSPITAL NOTES

Preliminary steps for a bond issue of \$60,000 for the erection of two new buildings and other improvements at the district tuberculosis hospital operated jointly by Preble and Montgomery Counties have been taken. Plans include an administration building to care for 30 additional patients, an operation room and other facilities, and a children's building.

—Upon recommendation of a special committee of the Lawrence County Medical Society, a new hospital staff has been appointed for the Deaconess Hospital, Ironton, which comprises practically all physicians in the city with the exception of those operating private hospitals and a few non-members of the society.

—The Youngstown Hospital Association is the recipient of a gift of \$5,000 under the will of the late Dr. A. M. Clark of that city.

—The 500-acre tract of land at Ancor, near Cincinnati, for which the State Board of Administration offered the government \$75,000 as a site for the new hospital for feeble-minded, is no longer under consideration in that connection, the board's offer having been rejected. Suggested sites in northeastern Ohio are being considered.

—Miss Nellie Harris, Pittsburgh, Pennsylvania, has assumed her duties as superintendent of Orchard Hospital, Marion. Miss Harris was employed at the hospital several years ago when it was operated by Dr. J. O. Starr.

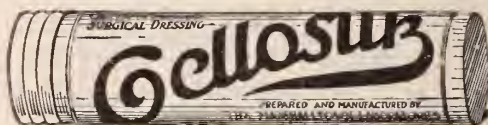
—Summit County Commissioners now propose to erect the contagious disease hospital, which has been under consideration by the Akron city council for two years, with funds raised by a bond issue which will be voted on April 27. Acceptance of this responsibility by the county indicates splendid cooperation between the city and county in the interest of public health.

—The twenty-seventh anniversary of the Columbus Children's Hospital was celebrated March 2. During the year 1919 the hospital cared for 631 patients in the wards and 1,514 in the dispensary. A medical library was one of the valuable features innovated during the year.

—Within two years St. Luke's Hospital, Cleveland, expects to complete a new \$1,000,000 hospital building containing at least 300 beds. The work will be partly financed by the Methodist Centenary and the Interchurch World Movement, and the balance of the funds will be secured by popular subscription.

—A radium hospital, the only one between New York and Chicago and the fifth in this country, will be opened in Columbus, June 1, by Drs. Edward Reinert and R. R. Kahle. The institution, to be known as the Columbus Radium Hos-

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Perforated Cellosilk is applied direct to wounds of all kinds. It is covered with absorbent cotton which can be frequently changed without disturbing the wound.

**NON-ADHERENT**—does away with the pain and destruction of forming granulations when ordinary form of dressing is removed.

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**DRAINAGE AND AIR**—admits air to the wound and allows drainage through the perforations of dressing. "STANDARD PERFORATE" Roll 9 in. x 12 ft. (double weight only) \$2.00.

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"Standard" same size (single weight) ..... 1.25

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factor in the selection of apparatus which is all  
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pital, will be located in the building formerly occupied by the Keeley Cure Institute, and which is being extensively remodeled.

—Announcement has been made that the village of Loudonville will soon be the owner of a modern twenty-bed hospital, the gift of Mr. Charles F. Kettering of Dayton. Mr. Kettering was the recent donor of radium, valued at \$7,200, to the Homeopathic Hospital at Ohio State University.

—Plans for a new hospital building at the Boys' Industrial School, Lancaster, have been completed by Kyle W. Armstrong, architect for the State Board of Administration. The new building is to be erected in fulfillment of a pressing need at the school for proper facilities for the care of boys afflicted with contagious diseases, many of the wards being at the age when children are generally subject to chickenpox, measles, mumps, etc.

—An Ohio site is proposed for one of at least four church controlled hospitals for incurables recommended in the hospital program of the inter-church movement. Other hospitals are proposed for Massachusetts, Virginia and Missouri. The recommendation, according to church officials, results from the need for such institutions revealed by the recent survey conducted by the movement's department of hospitals and homes.

### Annual Meeting of Anaesthesia Research Society

The National Anaesthesia Research Society will hold its annual convention in Pittsburgh during the week of October 4, in conjunction with the Interstate Anaesthetists Association and the Pennsylvania Medical Society. It is possible that the Western Pennsylvania Dental Association also will join in the meeting.

To augment interest in the primary purpose of the society it has been announced that \$200.00 will be apportioned in prizes for the best papers on research in anaesthesia read at the national meeting. The contest is open to students, surgical, medical and dental practitioners throughout the United States.

#### INDUSTRIAL ACCIDENTS DECREASE

Reports of the claims department of the Industrial Commission for the month of February show that industrial accidents took a remarkable slump. During January there were reported a total of 13,332 claims, while for February, the total was only 9952.

In the public employees' class there were 47 accidents as compared with 64 in January. Fifty-one fatal accidents were reported. Considering the general activity of manufacturing plants everywhere at the present time, the record for February is unusually good.

Only 6060 claims were pending in the insurance fund on March 1, the smallest number in more than two years.

## The Question

Whether or not to administer Arsphenamine and Mercury salts to be slowly absorbed by muscular tissue or otherwise, must be answered by the clinician.

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We offer the professional services of these gentlemen to medical men. Any questions along the lines of their endeavor will be gladly answered. In addition to the research work, which is being carried on in various branches of science, our staff is abundantly able to give physicians practical suggestions in all that relates to lues and its treatment.

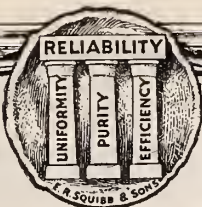
Correspondence with physicians is invited and will be welcome as we are anxious to demonstrate our desire to cooperate with them in every possible way.

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Anti-Streptococcic Serum Squibb is useful also in post-partum or puerperal sepsis, in erysipelas, and for septic conditions due to wounds infected with streptococci.

### For Increasing Phagocytosis in Sepsis

**Leucocyte Extract** is of paramount importance, either in conjunction with vaccine and serum, or alone if the exact pathogenic microorganism can not be determined.

### For the Prevention and Cure of Diphtheria

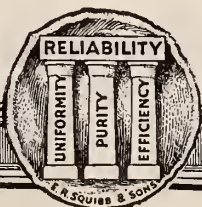
**Diphtheria Antitoxin (Globulin)** yields desired results. It is small in bulk for the number of units contained.

### For the Prevention of Small-Pox

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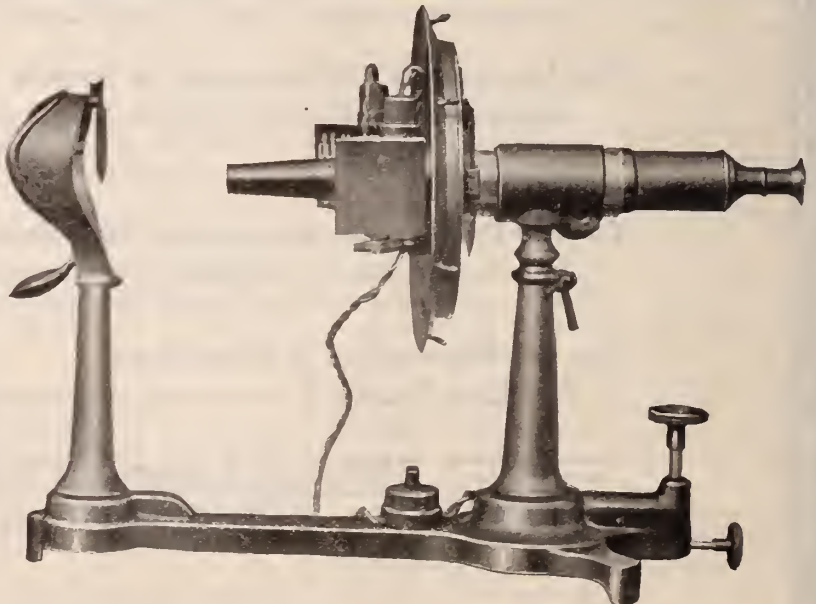
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# Ohio State Medical Journal

Published monthly by

THE OHIO STATE MEDICAL ASSOCIATION  
181 East State Street, Columbus, Ohio  
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This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.

Issued under the direction of the Publication Committee.

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**Next Meeting of the State Association,  
Toledo, 1920**

## EDITORIAL COMMENT

by D. K. M.

## Plans and Program

With this number of *The Journal* the detailed program of the scientific sessions for the forthcoming annual meeting of the State Association is presented, together with plans for general sessions and other features of entertainment.

The officers of the various sections and the local committee on arrangements have been co-operating for many weeks with Council in making the Seventy-Fourth annual meeting in Toledo, on June 1, 2, and 3, one of the most attractive in the history of medical organization in Ohio. There is no doubt but what you will be favorably impressed with the program set forth on the succeeding pages.

With the many new social and political problems confronting the medical practitioner there is greater reason now than ever before for getting together, discussing impending changes in government as they affect the medical profession, and devising means, methods and solutions.

One of the most interesting sessions will be the general meeting on the first evening of the conference, Tuesday, June 1, when the program will be devoted to discussion of medical economics, and particularly the problem of compulsory state health insurance, which is becoming each day more menacing.

For the first time since the war the Ohio members of the Medical Veterans of the World War will have an opportunity to assemble and renew acquaintances.

If you have not yet made your hotel reservations you should do so at once. The Toledo hotels have given assurance that all those in attendance at the meeting will be properly cared for provided reservations are made at this time. A detailed schedule of Toledo hotel rates was given in the April issue.

The program for your meeting starts on the following page.

Program of the

## Seventy-Fourth Annual Meeting

of the

# Ohio State Medical Association

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Toledo, Ohio, June 1, 2 and 3, 1920



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### GENERAL SESSIONS

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#### OPENING SESSION

Tuesday, June 1, 10:00 A. M.,

Auditorium, Elks Club, adjoining Y. M. C. A.

---

1. Call to order by the President, James F. Baldwin, M. D., Columbus.
  2. Address of welcome on behalf of the City of Toledo.
  3. Address of welcome on behalf of Toledo and Lucas County Academy of Medicine. By E. W. Doherty, M. D., Toledo, the President.
  4. Annual address by the President of The Ohio State Medical Association.
  5. Announcement of the general details of the program, by John G. Keller, M. D., the general chairman of the Committee on Arrangements.
- 

#### SECOND SESSION

Tuesday, June 1, 8:00 P. M.

Y. M. C. A. Auditorium

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1. Conference on Compulsory State Health Insurance. Discussion led by Frederick R.

Green, M. D., Chicago, Secretary of Council on Health and Public Instruction, American Medical Association, and Walter H. Snyder, M. D., Toledo.

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#### THIRD SESSION

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Wednesday, June 2, 3:30 P. M.,

Auditorium, Elks Club, adjoining Y. M. C. A.

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#### 1. ORATIONS:

##### *Medicine—*

"High Blood Pressure, Its Causes and Management"—by Lewellys Barker, M. D., Professor of Clinical Medicine, Johns Hopkins University Medical Department, Baltimore.

##### *Surgery—*

"Non-Tubercular Infections of the Kidney"—by Hugh Cabot, M. D., University of Michigan, Ann Arbor.



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## HOUSE OF DELEGATES

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### FIRST SESSION

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**Tuesday, June 1, 11:00 A. M.,**  
Room H, Small Gymnasium, Y. M. C. A.

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1. *Call to order by the President.*
2. *Roll Call.*
3. *Miscellaneous Business—*
  - (a) Selection of a Special Committee to act on recommendations embodied in President's address.
  - (b) Consideration of minutes of previous meeting. Minutes were printed in JOURNAL, June, 1919, page 357.
  - (c) Introduction of resolutions.
4. *Nomination and Election of Nominating Committees—*

(Nominations from the floor, with one representative on the committee to be elected from each district. This committee shall report to the Second Session the result of its deliberations in the form of a ticket containing the names of three members for the office of president-elect, and of one member for each of the other offices to be filled. This procedure is necessary under Chapter V, Section 1, of the By-Laws.)
5. *Report of Officers—*
  - (a) Treasurer's report.
  - (b) Reports of Councilors as to the condition of the societies in their respective districts.
6. *Reports of Standing Committees—*
  - (a) Publication—E. R. Brush, M. D., Zanesville, chairman.
  - (b) Public Policy and Legislation—J. H. J. Upham, M. D., Columbus, chairman.
  - (c) Medical Defense—J. E. Tuckerman, M. D., Cleveland, chairman.
  - (d) Auditing and Appropriations—Wells Teachnor, M. D., Columbus, chairman.
  - (e) Medical Education—Charles Edwin Briggs, M. D., Cleveland, chairman.
  - (f) General Secretaries Committee—C. O. Jaster, M. D., Elyria, chairman.
7. *Reports of Special Committees—*
  - (a) Control of Cancer—Andre Crotti, M. D., Columbus, chairman.
  - (b) Committee on Sociology—S. J. Goodman, M. D., Columbus, chairman.
  - (c) Hospital Standardization—Andrew Rogers, M. D., Columbus, chairman.

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### SECOND SESSION

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**Wednesday, June 2, 1:00 P. M.,**  
Room H, Small Gymnasium, Y. M. C. A.

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Public Policy and Legislation. (One year each.)

(c) Three members of the Publication Committee. (One year each.)

(d) Two members of the Committee on Medical Defense. The three-year term of Dr. C. T. Souther, Cincinnati, expires. On the removal from the state of Dr. W. J. Stone, Toledo, whose term on this committee will expire in 1921, Council elected Dr. W. H. Snyder, Toledo, to serve until the next meeting of the House of Delegates. It is necessary, therefore, for the House of Delegates to regularly elect a successor to Dr. Stone for the period of one year. (The term of Dr. J. E. Tuckerman, Cleveland, does not expire until 1922.)

(e) Three members of the Committee on Medical Economics.

### 3. *Election of Members of Council—*

Members of Council are elected for two-year terms, those representing odd-numbered districts expiring in even numbered years. To be elected, therefore:

Councilor, First District—Present incumbent, Robert Carothers, M. D., Cincinnati.

Councilor, Third District—Present incumbent, R. R. Hendershott, M. D., Tiffin.

Councilor, Fifth District—Present incumbent, R. K. Updegraff, M. D., Cleveland.

Councilor, Seventh District—Present incumbent, J. S. McClellan, M. D., Bellaire.

Councilor, Ninth District—Present incumbent, J. S. Rardin, M. D., Portsmouth.

### 4. *Election of Delegates and Alternates to the American Medical Association—*

The American Medical Association requires state associations to elect delegates and alternates for two-year terms, indicating the alternate elected for each delegate. It also requires that delegates and alternates must be Fellows of the American Medical Association for at least two years preceding election. It is necessary, therefore, to elect for two-year terms:

(a) Six delegates.

(b) Six alternates.

Those whose terms now expire are:

#### DELEGATES

J. H. J. Upham, M. D., Columbus.  
Ben R. McClellan, M. D., Xenia.  
C. D. Selby, M. D., Toledo.  
William H. Peters, M. D., Cincinnati.  
George E. Follansbee, M. D., Cleveland.  
Granville Warburton, M. D., Zanesville.

#### ALTERNATES

D. H. Morgan, M. D., Akron.  
L. D. Allard, M. D., Portsmouth.  
R. C. M. Lewis, M. D., Marion.  
Rufus B. Hall, M. D., Cincinnati.  
J. B. Alcorn, M. D., Columbus.  
C. L. Minor, M. D., Springfield.

5. *Selection of place for the Annual Meeting of 1921.*
6. *Miscellaneous Business.*
7. *Installation of Officers for 1920-1921.*
8. *Final Adjournment—House of Delegates.*

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### ANNOUNCEMENT

Immediately following adjournment the Council meets for reorganization—the selection of a chairman (who, according to the Constitution, is President of the Association), and a secretary of Council.

1. *Report of Nominating Committee—*
2. *Annual Election of Officers and Committees—*
  - (a) President-Elect. (One year.)
  - (b) Chairman and two members of the Committee on

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## SURGICAL SECTION

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HARRY NOBLE, M. D., St. Marys.....Chairman  
 HOWARD STITT, M. D., Washington C. H....Secretary

Meeting Place—Auditorium of Elks Club, adjoining Y. M. C. A.

### FIRST SESSION

Tuesday, June 1, 2:00 P. M.

1. "Some Principles in the Retentive Treatment of Fractures"—by R. H. McKay, M. D., Akron. Discussion opened by Walter G. Stern, M. D., Cleveland.
2. "The Efficient Aid of the American Medical Profession in the World War as Viewed by a Civil War Veteran"—by F. C. Larimore, M. D., Mt. Vernon.
3. "The Surgical Aspect of Chronic Lesions of Pylorus and Adjacent Viscera"—by Francis G. Leonard, M. D., Cleveland. Discussion opened by C. N. Smith, M. D., Toledo.
4. "Surgical Fads and Fancies"—by O. S. Steiner, M. D., Lima. Discussion opened by S. D. Foster, M. D., Toledo.
5. "Some Surgical Phases of the Cancer Problem"—by Frank Warner, M. D., Columbus. Discussion opened by R. B. Hall, M. D., Cincinnati.

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### SECOND SESSION

Wednesday, June 2, 9:00 A. M.

6. "Terminal Complications of Chronic Indurated Ulcer of Stomach and Duodenum"—by James A. Sherbondy, M. D., Youngstown. Discussion opened by C. S. Hamilton, M. D., Columbus.
7. "Operative Treatment of Empyema"—by F. E. Bunts, M. D., Cleveland. Discussion opened by Joseph Ransohoff, M. D., Cincinnati.
8. "Non-union in Fractures"—by Carl D. Hoy, M. D., Columbus. Discussion opened by Robert Carothers, M. D., Cincinnati.
9. "A Contribution to the Use of Local Anesthesia in Surgery"—by Desider Foldes, M. D., Cleveland. Discussion opened by J. C. Oliver, M. D., Cincinnati.
10. "The Therapeutic Possibilities of Blood Transfusion in Surgical Conditions"—by E. R. Arn, M. D., Dayton. Discussion opened by B. M. Ricketts, M. D., Cincinnati.

## THIRD SESSION

Thursday, June 3, 9:00 A. M.,

Meeting Place—Auditorium Elks Club, Adjoining Y. M. C. A.

Joint session with the Section on Medicine, to which all members are invited. See program of Medical and Surgical Section.

NOTE.—This program has been prepared to interest all members of the association, and for that reason no other section meetings will be held on Thursday morning.

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## MEDICAL SECTION

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G. F. ZINNINGER, M. D., Canton.....Chairman  
 R. A. RAMSEY, M. D., Columbus.....Secretary

Meeting Place—Room A, Auditorium Y. M. C. A.

### FIRST SESSION

Tuesday, June 1, 2:00 P. M.

1. "The Treatment of Cerebro-Spinal Syphilis with Especial Reference to Late Results of Intra-Spinal Treatment"—by C. L. Cummer, M. D., Cleveland.
2. "Late Effects of Influenza"—by H. B. Blakey, M. D., Columbus.
3. "A Comparison between Blood Chemistry and Other Laboratory Methods in Nephritis"—by J. J. Coons, M. D., Columbus. Discussion opened by B. R. Kirkendall, M. D., Columbus.
4. "Nephritis, An Infectious Process"—by B. J. Dougherty, M. D., Canton.
5. "Medical Aspects of Blood Transfusion"—by L. A. Levison, M. D., Toledo. Discussion opened by H. G. Pamment, M. D., Toledo.

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### SECOND SESSION

Wednesday, June 2, 9:00 A. M.

6. "Diagnosis of Incipient Pulmonary Tuberculosis"—by B. C. West, M. D., Dayton. Discussion opened by C. O. Probst, M. D., Columbus.
7. "Cardio-Respiratory Mechanism in Health and Disease"—by R. G. Pearce, M. D., Akron. Discussion opened by C. D. Christie, M. D., Cleveland.
8. "Unusual Phases of Duodenal Ulcer" (Lan-



tern Slides)—by J. D. Dunham, M. D., Columbus. Discussion opened by E. W. Mitchell, M. D., Cincinnati.

9. "Industrial Lead Poisoning"—by E. R. Hayhurst, M. D., Columbus. Discussion opened by P. M. Holmes, M. D., Toledo.
10. "Indications for Spinal Puncture"—by R. K. Updegraff, M. D., Cleveland.

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## MEDICAL AND SURGICAL SECTIONS

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Thursday, June 3, 9:00 A. M.

(Joint session of Medical and Surgical Sections—Auditorium Elks Club, adjoining Y. M. C. A.)

### EXOPHTHALMIC GOITRE—A SYMPOSIUM

1. "Physiology of the Normal Thyroid and the Physiology of the Thyroid in Exophthalmic Goitre"—by David Marine, M. D., Cleveland.
2. "The Etiology and Pathology of Goitre, with Special Reference to Their Bearing on the Prevention, Prognosis and Treatment of the Disease"—by Andre Crotti, M. D., Columbus.
3. "The Medical Problems in the Management and Treatment of Goitre"—by C. F. Hoover, M. D., Cleveland.
4. "The Surgical Problems in the Management and Treatment of Goitre"—by George W. Crile, M. D., Cleveland.

Discussion on symposium opened by Lewellys Barker, M. D., Baltimore, Md., and Harry S. Noble, M. D., St. Marys.

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## OBSTETRICS AND PEDIATRICS

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JOHN GARDINER, M. D., Toledo.....Chairman  
HAROLD J. MORGAN, M. D., Toledo.....Secretary

Meeting Place—Room C, Adjoining Y. M. C. A. Auditorium

Owing to the protracted illness of Dr. Harold J. Morgan, secretary of the Section on Obstetrics and Pediatrics, complete data on the program for this section was not available for publication at the time this issue went to press. Dr. John Gardiner, chairman of the Section, and Dr. Morgan are now bending every effort toward its completion, and by the time this number reaches

you an interesting program for this section will be in type for inclusion in the pamphlet program which will be presented to you at the registration desk in Toledo. In previous years the sessions of this section have been among the most successful held at the annual meetings and its programs have been of the highest order. A glance at the partial list of speakers who will participate in this year's program, which includes Drs. Magnus Tate, Cincinnati; Andrews Rogers, Sylvester J. Goodman, Columbus; W. D. Fullerton, Cleveland; W. G. Dice, Toledo, and L. R. Fast, Paulding, is convincing evidence that this year's program, when completed, will be most attractive.

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## EYE, EAR, NOSE AND THROAT

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J. M. INGERSOLL, M. D., Cleveland.....Chairman  
W. W. ALDERDYCE, M. D., Toledo.....Secretary

Meeting Place—Room G, Y. M. C. A.

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### FIRST SESSION

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Tuesday, June 1, 2:00 P. M.

1. Symposium on Cataract:

(a) "The Observation, Management and Treatment of the Cataract Patient Before and After Operation"—by W. H. Snyder, M. D., Toledo.

(b) "Choice of a One-Stage or Two-Stage Operation"—by Robert Sattler, M. D., Cincinnati.

(c) "Old and New Technic in the Operation for Removal of Cataract"—by D. T. Vail, M. D., Cincinnati.

Discussion on symposium to be opened by Drs. C. F. Clark, W. E. Bruner and C. C. Stuart.

2. "Eye Injuries and The Workmen's Compensation Law"—by J. E. Brown, M. D., Columbus. Discussion opened by C. C. Stuart, M. D., Cleveland.
3. "Intra and Extra Dural Tumors of the Optic Nerve and Their Surgical Treatment with Conservation of the Eyeball"—by Horace S. Reid, M. D., Cincinnati. Discussion opened by Robert Sattler, M. D., Cincinnati.
4. "Intra Ocular Infection of Bacillus Anthrax"—by Paul J. Stueber, M. D., Lima. Discussion general.

## SECOND SESSION

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Wednesday, June 2, 9:00 A. M.

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5. Address—"Vertigo Due to Labyrinthine Irritation"—by P. D. Kerrison, M.D., New York.
6. "Acute Mastoiditis Following Influenza with Report of a Series of Cases"—by W. E. Murphy, M.D., Cincinnati.
7. "Differential Diagnosis of Foreign Bodies, Traumatism and Disease of Esophagus"—by Thomas Hubbard, M. D., and E. G. Galbraith, M. D., Toledo. Discussion opened by Louis Smead, M. D., Toledo.
8. "The Laryngologist and Disease of the Lungs"—by J. A. Thompson, M.D., Cincinnati. Discussion opened by Robert Butler, M. D., Bellefontaine.
9. "Nasal Deformity Before and After Operation" (illustrated with lantern slides)—by Myron Metzenbaum, M.D., Cleveland. Discussion opened by William Mithoefer, M. D., Cincinnati.
10. "Lip Reading for the Deaf and Partially Deaf Adult, Mueller-Walle Method" (with demonstrations)—Mrs. Rodney C. Dewey, Toledo.

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DERMATOLOGY, PROCTOLOGY AND  
GENITO-URINARY SURGERY

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M. B. MCGONIGLE, M. D., Toledo.....Chairman  
JOHN G. KELLER, M. D., Toledo.....Secretary

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Meeting Place—Room D, Y. M. C. A.

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## FIRST SESSION

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Tuesday, June 1, 2:00 P. M.

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1. "Venereal Prophylaxis in Civilian Life"—by H. L. Sanford, M. D., Cleveland.
2. Vesical Tumors"—by E. O. Smith, M. D., Cincinnati.
3. "Treatment of Obstruction of the Outlet of the Urinary Bladder"—by W. E. Lower, M. D., Cleveland.

4. "Lesions of the Prostate and Their Treatment"—by H. P. Pomerene, M. D., Canton. Discussion opened by W. D. Haines, M. D., Cincinnati.
  5. "A New Technique for Radical Extirpation of the Penis"—by Hugh Baldwin, M. D., Columbus.
  6. "Fallacy of Depending on a Single Test for Renal Function"—by Simon Englander, M. D., Cleveland.
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## SECOND SESSION

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Wednesday, June 2, 9:00 A. M.

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7. "Some Observations on Congenital Polycystic Kidney"—by Frederick C. Herrick, M. D., Cleveland.
8. "Proctitis Sphinctoris"—by J. M. Frick, M. D., Toledo.
9. "Pre-Cancerous Condition of the Skin"—by E. D. Tucker, M. D., Toledo.
10. "The Treatment of Malignancy of the Skin"—by H. N. Cole, M. D., Cleveland.
11. "Acne Vulgaris"—by Charles J. Shepard, M. D. Columbus.
12. "Scabies"—by J. W. Miller, M. D., Cincinnati.

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HYGIENE AND SANITARY SCIENCE

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A. W. FREEMAN, M. D., Columbus.....Chairman  
J. R. McDOWELL, M. D., Columbus.....Secretary

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Meeting Place—Room E, Y. M. C. A.

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## FIRST SESSION

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Tuesday, June 1, 2:00 P. M.

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1. "Ohio Public Water Supplies"—by W. H. Dittoe, Chief Engineer, State Department of Health. Discussion opened by Roger G. Perkins, M. D., Cleveland.
2. "Our Unfortunate Country Cousins"—by G. E. Robbins, M. D., Chillicothe. Discussion opened by F. G. Boudreau, M. D., Columbus.



## 3. Symposium on Public Health Nursing:

(a) "Red Cross Public Health Nursing Problems"—by Miss Lota V. Lorimer, R. N., Director of Public Health Nursing, Lake Division, A. R. C.

(b) "Activities of Bureau of Public Health Nursing, Ohio State Department of Health"—by Miss Hulda A. Cron, R. N., Supervisor of Nursing, State Department of Health.

(c) "Local Public Health Nursing"—by Miss Grace Donsing, R. N., Public Health Nurse, Salem, Ohio.

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 SECOND SESSION
 

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 Wednesday, June 2, 9:00 A. M.
 

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4. "The District Tuberculosis Hospital"—by R. R. Richison, M. D., Springfield. Discussion opened by A. O. Peters, M. D., Dayton.
5. "The Operation of a Venereal Disease Clinic"—by Edgar Thompson, M. D., Akron. Discussion opened by Guy G. Giffin, M. D., Dayton.
6. "Relation of the Industrial Physician to Public Health Agencies"—by R. P. Albaugh, M. D., Cleveland. Discussion opened by Clyde Leeper, M. D., Akron.
7. "Trachoma" (lantern slide demonstration)—by John McMullen, M. D., Surgeon United States Public Health Service.

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 NERVOUS AND MENTAL DISEASES
 

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F. C. WAGENHALS, M. D., Columbus.....Chairman  
 R. HARVEY COOK, M. D., Oxford.....Secretary

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 Meeting Place—Room F, Y. M. C. A.
 

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 FIRST SESSION
 

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 Tuesday, June 1, 2:00 P. M.
 

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1. "Malingering as a Post-War Condition"—by Charles W. Stone, M. D., Cleveland.

2. "Hyperthyroidism, Its Treatment, Especially with Reference to the Use of Corpus Luteum"—by Herman H. Hoppe, M. D., Cincinnati.
3. "Clinical Aspects of Peripheral Nerve Injury and Regeneration"—by Lewis J. Pollock, M. D., Chicago, Ill.
4. "Clinical Signs in Pyramidal Disease"—by Robert Ingram, M. D., Cincinnati.

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 SECOND SESSION
 

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 Wednesday, June 2, 9:00 A. M.
 

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5. "The Feeble-Minded Problem"—By Charles F. Neu, M. D., Indianapolis, Ind.
6. "Coma"—by Martin H. Fischer, M. D., Cincinnati.
7. "Well-drillers Palsy." Case report, original presentation—by Frank W. Langdon, M. D., Cincinnati.
8. "Cranio-Cerebral Injuries"—by T. S. Jackson, M. D., Cleveland.

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 American Medico-Psychological Meeting
 

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As the annual meeting of the American Medico-Psychological Association, scheduled for the Hotel Statler, Cleveland, June 1 to 4, inclusive, conflicts with the dates of the State Association meeting, a number of physicians who will take part in the program for the Section on Nervous and Mental Diseases at Toledo have announced that they will divide their attention equally between the two conventions by leaving Toledo for Cleveland on Wednesday afternoon, after the programs for the second and final session of their section and the Third General Session have been rendered. Drs. H. H. Drysdale, C. W. Stone, K. S. West and W. A. Searl, assisted by the superintendents of the Ohio State Hospitals, constitute the committee on arrangements for the Cleveland meeting. The American Medico-Psychological Association has the distinction of being the oldest medical society in the United States.

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## SPECIAL CONVENTION FEATURES

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The local committee on arrangements for the Toledo meeting is making every effort to insure visitors at the seventy-fourth annual meeting a good time socially as well as a profitable one scientifically.

At the request of Council of the State Association the long established custom of holding a smoker on the first evening has been dispensed with in favor of an extra general session, which will be devoted to the subject of compulsory health insurance. The speakers will be Dr. Frederick R. Green of Chicago and Dr. Walter H. Snyder of Toledo. Dr. Green is secretary of the Council on Health and Public Instruction of the American Medical Association. He has followed the health insurance movement closely for the past ten years and will be able to throw some interesting light on its development and the attitude which the medical profession should assume toward it. Dr. Snyder is perhaps more conversant with the subject of health insurance than any other physician in Ohio. Familiar with its many details and its application in European countries, he made the Ohio Health and Old Age Insurance Commission "sit up and take notice" when he appeared before hearings of that body in northern Ohio. Dr. Snyder is a member of the State Association's special committee on health insurance.

### Banquet Plans

The annual banquet on Wednesday evening, June 2, 6:00 p. m., at the LaSalle and Koch restaurant, will be informal. Plates will be \$5.00 each. Ladies are invited. Retiring President Baldwin will preside at the banquet, and his speech will be responded to by the incoming president, Dr. Charles Lukens. Post-prandial speakers announced for this occasion are Edgar A. Guest of Detroit, and Rt. Rev. Bishop Joseph B. Schrembs, whose subject will be "The World and Its Literature."

Edgar A. Guest is a poet and humorist of national fame; ex-president of the American Press Humorists. He is an Englishman who came to this country at an early age, was educated in America and since 1905 has conducted a column of verse and humorous sketches for the Detroit Free Press. He is read and quoted extensively

throughout the country and is one of the best known platform speakers in a humorous vein.

Bishop Schrembs, born in Bavaria, Germany, is an educator and divine of national and international reputation. He has instructed in a number of theological schools in the subjects of philosophy and theology and since 1911 has been bishop of the diocese of Toledo, having come to that city from Grand Rapids, Michigan, where he held a similar office.

### Luncheon Meetings

County auxiliary legislative committeemen will be the guests of the Committee on Public Policy and Legislation at a luncheon Tuesday, June 1, 12 M., at the Elks Club, adjoining the Y. M. C. A. Dr. J. H. J. Upham, chairman of the state committee, will preside and there will be informal talks on legislative matters. Admission by card.

On Wednesday, June 2, 12 M., the annual meeting of the One Hundred Per Cent. Club will be held at the Elks Club. As in former years, this luncheon is given by *The Journal* to the presidents and secretary-treasurers of those county societies which have attained a one hundred per cent. membership, that is, have equalled or exceeded their membership enrollment for the previous year. Dr. H. M. Platter, treasurer of the State Association, will preside at this inspiring feast. There will be short, snappy talks by membership boosters. Admission by card.

### Dinner for Medical Women

Under the auspices of the Medical Women's Club of Toledo a dinner will be served for visiting women physicians at the Toledo Women's Club, 427 Superior Street, on Tuesday, June 1, 6:00 p. m. Reservations may be made through the secretary, Dr. Bertha King Hobart, 304 Produce Exchange Building, Toledo, at \$2.50 per cover.

### Entertainment for the Ladies

Entertainment of the visiting ladies is under the direction of a committee whose chairman is Mrs. Charles Lukens, wife of the president-elect of the Association. A tentative program includes a boat ride on Tuesday, June 1, at 2:00 p. m., on one of the beautiful White Star Line steamers to Sugar Island and return, with din-



ner on board, returning to Toledo about 8:30 p. m. For the afternoon of Wednesday, June 2, an automobile ride, probably along the historic Maumee, followed by tea and a musical at one of the country clubs, is planned. Mrs. Lukens reports that other pleasing affairs are being arranged.

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## LOCAL COMMITTEES

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### General Chairman for the State Association

John G. Keller, M. D., Toledo, Ohio



### Reception Committee

Walter H. Snyder, M. D., Chairman

Thomas Hubbard, M. D.	L. C. Grosh, M. D.
H. W. Dachtler, M. D.	Louis Miller, M. D.

### Entertainment Committee

C. W. Waggoner, M. D., Chairman

F. W. Alter, M. D.	J. F. Wright, M. D.
H. G. Pamment, M. D.	N. J. Seybold, M. D.
P. J. Bidwell, M. D.	E. B. Gillette, M. D.

### Committee on Badges

W. W. Alderdyce, Chairman

W. G. Gardner, M. D.	B. G. Chollette, M. D.
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### Committee on Exhibits

C. D. Selby, Chairman

Don K. Martin	J. M. Donnelly, M. D.
N. Gillette, M. D.	F. L. Eyestone, M. D.

### Committee on Projection Apparatus

J. T. Murphy, M. D., Chairman

D. D. Delzell, M. D.	S. D. Foster, M. D.
J. B. Metzger, M. D.	H. L. Price, M. D.
H. H. Beckwith, M. D.	H. W. Dachtler
A. J. Hartman	

## A Policy

Some time ago the Council of the State Association, at one of its regular meetings in Columbus, authorized the appointment of a special committee to work with the standing committee on Public Policy and Legislation in the formulation of definite proposals and recommendations on the attitude to be adopted by the profession of the state in dealing with the problem of compulsory state health insurance.

The concise but rather inclusive report submitted by this committee and adopted by Council at its last meeting follows:

"After thorough general discussion of the problem of state medicine and proposed health insurance legislation in Ohio, other states of America, and in European countries, this committee decided to report to Council at its next meeting, the following findings and recommendations:

"1. This committee is unanimously opposed to any plan of compulsory state health insurance that has so far been suggested or proposed.

"2. This committee believes that at least nine-tenths of the members of the profession in Ohio who are at all informed on the subject are likewise opposed to any plan of health insurance so far suggested.

"3. This committee recommends that means be devised by Council to supplement the efforts of *The Journal* to more fully inform the medical profession in this state of the problem raised by the health insurance proposal. The profession may then be in position to intelligently take a definite stand on the proposal.

"4. It is recommended that a complete analysis of the problem be brought to the attention of each physician in the state; care being taken that the entire problem be analyzed pro and con thus eliminating any possible criticism to the effect that the profession at the outset has adopted a selfish attitude of opposition.

"5. It is recommended that as an important factor in the campaign of education that a general session at the forthcoming annual meeting be devoted to this subject. In view of the fact that New York state is confronted by a crisis with the approaching enactment of health insurance legislation, it is recommended that at least one of the speakers for the session just referred to be a New York man in close touch with the problem in his state.

"6. It is suggested that Council in devising means for disseminating information might very properly co-ordinate its efforts with the Ohio Manufacturers' Association, the Ohio Dental Society, the Ohio Pharmaceutical Association and other organizations whose interests lie parallel with the medical profession in this matter."

This committee was composed of Drs. J. H. J. Upham, chairman; J. F. Baldwin, Robert Carothers, G. E. Follansbee, C. D. Selby, W. H. Snyder and C. H. Wells.

### Occupational Diseases

An amendment to the occupational disease reporting law, providing a penalty for physicians who refuse or neglect to report occupational diseases to the State Department of Health, will become effective May 4. It will be remembered that this amendment was passed last December and through its enforcement data and statistics are to be compiled which will later be a factor in determining whether or not laws will be enacted at some future time to include occupational diseases within the scope of the workmen's compensation law.

Every physician, the bill states, who is attendant on or called in to visit a patient whom he believes to be suffering from lead poisoning, poisoning from phosphorus, arsenic, brass, wood alcohol, mercury or their compounds or from anthrax or from compressed air illness and such other occupational diseases and ailments as the State Department of Health shall require to be reported must make such report to the state health commissioner within 48 hours from the time of the first visit. In this report must be the name of the patient with his address and occupation and also the name, address and business of his employer and the nature of the disease.

The amendment declares, "Whoever, being a practicing physician in the state of Ohio, neglects or refuses to make and transmit to the state commissioner of health any report provided for in section 1243-1 of the General Code (which names the diseases to be reported) shall be fined not to exceed one hundred dollars or imprisoned for not to exceed ninety days, or both, but no person shall be imprisoned under this section for a first offense and the prosecution shall always be as and for a first offense, unless the affidavit upon which the prosecution is instituted contains the allegation that the offense is a second or repeated offense."

These reports are to be made on, or in conformity with, standard schedule blanks prepared by the State Department of Health, which may be obtained free of cost.

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### Substantial, Effective Organization

Based on the report of a special committee appointed to survey the situation, the Cleveland Academy of Medicine has amended its constitution and by-laws to provide for substantially in-

creased membership dues of \$40.00 per year for active members. The report of this committee, together with its purposes, was published in a recent issue of *The Journal*.

This action by the largest local medical society in Ohio sets an example in efficient organization endeavor, and points the way to many desirable possibilities not the least of which is the education of the public to the value of trained, scientific skill in dealing with human ailments. So logical are the reasons for this new plan of organization that it is expected to develop into much more than a mere experiment, and will be watched with interest by the profession not only elsewhere in Ohio, but throughout the country.

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### Prohibition Prescriptions

Several flagrant and interesting violations of the Federal prohibition laws within the past few weeks have evoked from the Federal authorities still more rigid regulations governing the prescribing of intoxicants by physicians. In one large city not far distant it is declared that a quack practitioner had a large sign over his office door reading, "No examination required. Whiskey prescriptions, \$2.00." It is said that a line of waiting "patients" extended far into the street, and that hundreds of prescriptions were written daily.

While the Federal authorities declare that such cases are quite rare, they are determined to abolish the practice entirely. Henceforth physicians will not be permitted to write more than 100 prescriptions for liquor in any three months' period, according to State Prohibition Director, J. A. Shearer. Booklets containing this number of prescription blanks are furnished to physicians properly registered. Druggists are not permitted to use more than 100 gallon per quarter for filling prescriptions and compounding drugs, regardless of previous permits, according to the new ruling.

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### State vs. the Physician

The war reaction combined with other causes of unrest has contributed to the aid of self-appointed and self-anointed groups, subsidized by wealthy but misguided reformers and inspired by professional uplifters to make possible almost any degree of radical legislation.

The American Association for Labor Legislation was never before so confident of having enacted compulsory state health insurance as now. The situation in New York State is so acute at the present time that physicians from twenty adjoining counties in that state have pledged



themselves to renounce the practice of medicine providing the Davenport compulsory health insurance bill is enacted into law. Whether or not this pledge will be kept is a matter of comparatively little importance. It does, however, emphasize the attitude of the medical profession in that state toward what is conceived as a great menace.

If the medical profession is to oppose legislation of this sort, however, it must be solely on the ground that the effects of such laws would probably not decrease disease but rather greatly increase government expense and promote pauperism, and that it would place an immense financial burden on the state as a whole rather than as defensive opposition from the viewpoint of medical practice alone.

In this connection the following quotation from a recent letter of Dr. Frederick R. Green, secretary of the Council on Health and Public Instruction of the American Medical Association, who will be one of the speakers at a general session of the annual meeting in Toledo on the evening of June 1, is of particular interest:

"We can't possibly fight social insurance successfully simply on the ground that it is not a good thing for doctors and so far we have been able to get only a very few physicians to understand that in order to successfully oppose social insurance it must be fought on the broader platform that it would be harmful to the general public or at least that it would not be beneficial to them. If doctors will quit thinking and talking for a while about what health insurance would do to them and will begin to ask what it will do the public, they will find it's a good deal easier to secure support in opposing it. If it were a question to be decided by physicians, then arguments showing that it would be inimical to our personal and professional interests would be perfectly sound. But it isn't going to be settled by doctors. It is going to be settled by the public, either by direct vote or through the votes of their representatives in legislatures, and consequently the whole fight has to be carried on from the point of view of the public and not from the point of view of physicians. Right here is where the medical profession in England fell down and we don't want to make the same mistake"

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On the other hand the medical profession is better qualified to express opinions upon matters relating to public health than other bodies. Proceeding on this assumption the Committee on Public Health Legislation of the Pennsylvania Medical Society has undertaken to fully inform the medical profession of that state concerning harmful effects of general health insurance, both from the standpoint of the public and from that of medical science.

A movement of much significance has just been undertaken by the Chamber of Commerce of the State of New York which on April 1 unanimously adopted a report of its committee on insurance in opposition to the pending bill in that state. This report contains so many interesting points in opposition to proposed health insurance from the standpoint of industry and the public that it is reproduced in full on page 363 of this issue.

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Another development of nation-wide interest in proposed legislation is found in a series of questionnaires on social and labor problems recently issued by the Republican National Committee—a special subcommittee of which Samuel McCune Lindsay, former president of the American Association for Labor Legislation, is staff director. In one of these questionnaires is set forth a number of proposals including a complete category of radical innovations: health insurance, unemployment insurance, old age pensions, maternity insurance, minimum wage, minimum hours, and the extension of workmen's compensation to include occupational disease.

It appears that these questionnaires have been sent to those individuals and organizations which are likely to approve of the suggestions. It is significant that none of these documents were received by officials or committees of the State Medical Association or by representative business and industrial groups, but that they were sent to radical labor leaders and professional welfare workers.

Apparently it is the purpose to construct from the replies to the questionnaires planks for the national campaign. As one commercial leader has stated, "It is unthinkable that a great political party should determine its platform and future policies by the aid of an ouija board."

While it is not likely that many of the suggestions contained in these questionnaires will be given much if any serious consideration, it further emphasizes the inroads being made by radical groups in an effort to undermine conservative, substantial and permanent governmental functions, and to graft on to governmental administration temporary and passing fads and foibles.

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As indicating the attitude of the medical profession in other states where problems similar to those in Ohio have rapidly developed, an article on "Compulsory Health Insurance", from the March 15th issue of the *Journal of the Indiana State Medical Association*, is reproduced on page 365 of this number.

### The Cancer Campaign

The Committee on Control of Cancer of the State Association has designated the week of Sunday, May 9, as "Cancer Week" in Ohio, during which time a campaign of education will be directed to the laity. So thorough and comprehensive are the plans of this committee under the chairmanship of Dr. Crotti, that the American Society for the Control of Cancer has adopted them as an example to other states.

During the past several months it has been the purpose of this committee to hold one or more meetings of the various county medical societies on the subject of Cancer, and the profession as a whole is now in position to cooperate fully in the general campaign, more detailed plans for which are published elsewhere in this issue.

### Uncle Sam in Ohio

Under the above title Dr. Starling S. Wilcox, state supervisor of the War Risk Insurance Bureau, has written for *The Journal* an interesting article on the purposes and activities of the Public Health Service in this state. This article, which appears on page 369 of this number, presents in a clear fashion a number of characteristic cases brought to the attention of the supervisor and his assistants.

In practically every community there is a discharged soldier, sailor, marine or war nurse suffering from some injury or illness which dates back to service with the fighting forces. The United States Public Health Service is especially anxious to get in touch with these individuals, and toward this end a system of reconstruction bases has been established throughout the country for beneficiaries of the War Risk Insurance Bureau.

In addition to the accurate military system of supervision by which the individuals receive medical attention, the Public Health Service has established separate hospitals and sanatoria for the treatment of tuberculosis and other diseases.

Approximately 175 Ohio physicians are at present identified with the Ohio branch of the War Risk Insurance Bureau in the examination, treatment and rehabilitation of the nation's war-crippled.

The government's recognition of the value of medical services has never been very munificent. It is essential with the inauguration of work so important and far-reaching that the government refrain from adopting a penurious policy in dealing with physicians selected to render services. While it cannot be expected that the government's work will be as well compensated as it should be, efficient medical and surgical service must be at least fairly well compensated.

### The One Hundred Per Cent. Club

On April 19, thirty-six counties had qualified for membership in the One Hundred Per Cent. Club and their presidents, secretaries and treasurers were anticipating a big time when the club holds its annual luncheon in Toledo on Wednes-

day, June 2. Invitations will be mailed to these officers early this month, and to the officers of other counties as rapidly as they qualify in the one hundred per cent. class between now and June 1.

The county society officers may well be proud of their work for this year and the club meeting should be unusually inspiring. At this writing the membership guage for the state stood at 4,481, an increase of more than 300 members over the total at this time last year, and only 228 short of the enrollment attained in the entire year of 1919.

Hamilton County enjoys the distinction of being the first and only one of the four large academies to qualify as one hundred per cent. to date, having certified 475 members, an increase of two over the 1919 enrollment. Lucas, lacking only eight of the 258 certified in 1919, will probably be the second to qualify; while Cuyahoga and Franklin, with deficits of 20 and 26, respectively, will vie for third place.

Among the counties with memberships ranging from one to two hundred, Montgomery leads, having qualified as one hundred per cent., with seven to spare, more than two months ago. Stark County was the second in this group to equal its 1919 record and now shows a gain of five members. Mahoning County has almost reached goal, lacking but five of the necessary 121, while Summit is working hard to breach the distance from 161 to 196.

The smaller counties have equally splendid records and will get just as much pie as the big fellows at the delectable Toledo luncheon.

### Internship in Army Hospitals

The office of the Surgeon General has requested *The Journal* to give publicity to the fact that internships in the large general hospitals of the Army are now open to medical students and graduates. An agreement has been reached with some of the medical schools which require one year's hospital internship for diploma, to recognize a hospital internship in the Army general hospitals as the equivalent of their fifth year.

A commission as first lieutenant in the Regular Army Medical Corps awaits the graduate of a Class A medical school who attains a high standing (85% or above) and who receives the indorsement and recommendations of the medical school authorities for a commission in the Regular Army, and who meets the physical requirements and completes a year of hospital internship in the Army hospitals with credit and to the satisfaction of the Surgeon General of the Army. No further professional examination will be required.

The Army has always adhered to a high standard of medical education as necessary for a commission in the Medical Corps, namely, a diploma from a recognized medical school; at least one year's hospital experience, and a successful examination in all the branches of medical science. The age limit is at present 32 years. By the new plan the standard of requirements is in no wise lowered, but the medical student, upon completion of his fourth year, is offered an internship in one of the large general hospitals of the Army. The pay is \$60.00 per month with rations, quarters and necessary traveling expenses.



# The Prevention and Treatment of Industrial and Traumatic Deformities\*

Walter G. Stern, M. D., F. A. C. S., Cleveland

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**Editor's Note**—The world war with its backwash of thousands upon thousands of potential cripples has challenged the resources of the most brilliant orthopaedists. The work they have done in rehabilitating the deformed has in turn challenged the competence of the industrial physician and surgeon. While safety first precautions are calculated on to prevent accidents industrial surgery must meet all the demands made upon it in returning the injured workman to his task with the best possible functional cure. Purely surgical results with incapacitating deformities are no longer to be tolerated. Injuries and fractures must be so cared for from the time of receipt that neither infection nor improper treatment will cause any avoidable hinderance to rehabilitation. Outstanding industrial surgery thus becomes one of the crying needs of the country and a sufficient number of physicians and surgeons must be developed to carry it on successfully. This paper opens a far broader field of discussion than a difference of opinion with regard to plating fractures.

**M**ODERN orthopaedic surgery would hold that all casualties, injuries or fractures are potential deformities and that the principles of reconstruction must be applied with the first dressing and continuously carried out, until complete functional recovery has been attained. While the present day military needs have brought out little that is new, yet they have standardized our practices and focussed attention upon the necessity for *functional cure and rehabilitation*.

General surgery has long been contented with excising or repairing the damaged tissues, and a case was considered cured when the wounds no longer required dressing. Orthopaedic surgery is satisfied only when the injured man is able to make as much functional use of the damaged part as is humanly possible.

## ENGLAND'S PROBLEMS

When, in 1917, England awoke to the fact that she had over 500,000 potential cripples on her hands, all of whom had already passed through the ordinary channels of surgical treatment and had been discharged from active hospital care, she realized the urgent necessity for preventative and functional construction methods in their respective places.

Her attention was called to this problem by Sir Robert Jones of Liverpool through the case of Colonel, now General X. The latter had been shot through the left shoulder at the battle of Ypres, and the wound being dressed with the patient in the prone position, the arm was adducted and laid across the chest, and the left hand usually grasped the back of the right shoulder to steady the injured member and ease the pain. The elbow became stiff from oedema and disuse. The shoulder wound healed and ankylosed, and when Col. X. was discharged "cured" all he could do with shoulder, arm, forearm and hand was to wiggle the fingers of the left hand over the right shoulder.

He was declared unfit for further military service.

Jones put a chisel through the humerus just below the shoulder, abducted the arm as far as possible and turned the palm of the hand forward. When this wound healed and the callus was firm, the shoulder was still ankylosed, but the arm was *freely movable in all directions with the scapula*. Hydro and mechano-therapy freed up the stiffened elbow, and in six months' time X was back at the front as a Brigadier General.

Such a striking functional cure is not prerogative of military orthopaedic surgery alone. "Peace hath its victories no less renowned than war." The principles involved are not new, but like all well accepted facts need to be restated, possibly from new viewpoints from time to time.

Of the economic and sociologic (not to say political) aspects of the case at hand, it is needless to speak on this occasion. In a previous paper (*Ohio State Medical Journal*, March, 1919), I have written of the relation of the present interpretation of the Workmen's Compensation Act to this problem. Suffice it to say that earnest effort seems to be made to improve the conditions spoken of.

## PREVENTION

The most vital factor in the prevention of deformity after injury is an appreciation of the principles of modern asepsis and control of hemorrhage, the value of proper fixation and complete rest of the injured member in controlling and preventing inflammation, and the necessity for a proper interpretation of the injury, and an understanding and appreciation of the necessity for carrying out the correct surgical measures in their proper sequence at the most favorable time.

Too often casualty surgery is relegated to unskilled and untrained men (surgically), who would otherwise not have the temerity to undertake real surgical work.

Infection is the greatest factor in producing

\*Read before the Surgical Section of the Ohio State Medical Association, during the 73rd Annual Meeting at Columbus, May 6, 1919.

these deformities and must be avoided *at all hazards and at all costs* by scrupulous care during the first aid and by refraining from all unnecessary operative surgical intervention, until the time comes when better circulation has been re-established and the damaged parts more immune to irritation and infection. It will usually be sufficient for the first aid to apply to sterile emergency dressing and firmly bandage the injured part to a supporting splint or brace and transport the patient to more favorable surroundings—hospital or doctor's office when possible—where the *real "first aid"* should be given. This should consist of a thorough cleansing and disinfection of



"First aid!" to a simple closed fracture of the thigh. This patient was operated on four hours after receipt of injury. Final result two years after—united, infected fracture, fistulae, with three inches shortening. Patient cannot put any weight upon the leg.

the part, the debridement of all tissues whose vitality is manifestly lost, careful haemostasis, the *"toilet of the wound for tomorrow's needs,"* loose suturing for the approximation of the soft tissues, the complete reduction of fractures—usually under anaesthesia—and finally the proper fixation of the injured member in the position most suitable for combatting any deformity which might arise.

For instance in injuries which might lead to a drop-wrist fix hand in a cock-up splint; in Pott's fractures place the foot in supination; in intracapsular fractures or epiphyseal separation of the hip, abduct and fix the thigh in extreme abduction and internal rotation of the foot, etc., etc.

The A. E. F. early devised a number of simple splints for the above named purposes, which had been found by the experience of our allies to be well adapted to the purposes intended. The detailed use of those splints will be found in the Red Cross Manual of Splints or in any book on Military Orthopaedic Surgery.

An X-ray should be taken of all fractures to

aid in the diagnosis and check up the results of the treatment. It is not infallible and should always be an aid and guide, never the master; two different views should always be made.

Extensive cutting or suturing operations should be avoided at this stage if possible, on account of impeding the circulation and hastening infection. *In fracture of the patella or olecranon it has been noted that if the parts are properly fixed and allowed to rest, that the joints soon accustom themselves to the presence of the hemorrhage and set up a defensive process which allows of open operation at about the eighth day with comparatively slight risk of infection. Union from the delayed operation will be found just as early and as firm as that from an immediate repair.* Small puncture wounds of the hands and feet severing tendons (in the absence of other indications for operative interference) are best left untouched and the hand bandaged so as to relax the tendon. After all danger of infection has passed, the wound can safely be enlarged and the tendons found and sutured. They will of course be found retracted but with care in bandaging they will not be much further retracted at the fourth day than they were after four hours.

In a series of 45 cases of small entrance wounds with severing of the tendon treated at one of Ohio's largest hospitals, 38 were opened up extensively and the tendons sutured at the earliest possible moment; of these 21 became infected to such an extent that the sutures pulled out and a complete operative failure with deformity followed. Several others had milder degrees of infection and drainage had to be used. I have no statistics as to the success of the conservative treatment with delayed suture, but the final results could not possibly be any worse.

In crushing wounds of the hands and fingers absolute conservatism should rule. No tissue should be cut away that could possibly survive; few sutures should be inserted, to avoid cutting off circulation beneath them, and the parts carefully splinted.

#### HANDLING OF FRACTURES

Fractures, whether compound or simple, should never be plated, wired or sutured as a part of the first aid. Closed fractures should never be opened at this time unless there is absolute evidence that important blood vessels have been severed. Injured and severed nerves can safely wait a few days for aseptic suture.

It is not in place here to enter into any controversy for or against the operative treatment of fractures. It is the writer's belief that *no* fracture should be operated upon where it is possible to hold the parts in alignment by simpler means, that *end to end apposition* is a *needless* attainment, that good union and good function will usually result if the fragments are in approximation and *proper alignment*, and that *hardware*, i.e., steel bone plates, metal bands,



etc., increase the danger of infection and non-union, and are detrimental to the proper deposit of callus. Bone-grafting is superior to metal plates.

The use of the Steinman pin, Finchiotta stirrup, Caliper tongs, Thomas & Hodgen splints, Balkan frames, etc., in the military hospitals in France has clearly proven that operation need rarely be resorted to for the proper *reduction* and *fixation* of fractures of the long bones.

As soon as possible the parts must be freed from splints or fixation. Massage, motion and use should be begun early to avoid ankylosis, inflammatory adhesions of joints and tendons, and muscle wasting. Just when such measures are to be begun rests upon the nature of the injury: many fractures, especially those near joints should be thus treated within two to three weeks.

Finally, hydro and mechano-therapy (to be described in a subsequent chapter) round out the treatment and restore the industrial casualty victim back into industry in the shortest possible time.

#### PERIOD OF DISABILITY

Some question has arisen as to how long various accidents might keep the worker away from labor and on the books of the insurance and industrial commissions, before he would be held to be exaggerating his injuries. These periods are a great deal longer than is commonly held. A military medical commission found that the *average* length of the disability "from duty to duty," of various fractures was as follows:

Shaft of humerus .....	14	weeks
Head and neck of humerus.....	11.5	weeks
Humerus above condyles .....	9	weeks
Elbow .....	12	weeks
Both bones of forearm.....	10.8	weeks
Femur—all sites .....	20	weeks
Leg .....	18	weeks
Foot .....	16.8	weeks
Pott's Fracture .....	12	weeks

#### TREATMENT

The treatment of the untoward results and disabling deformities following injury present few technical difficulties and can only be briefly summarized here.

Infection is combatted by free drainage and good fixation. The use of paraffinated gauze and drains has been gratefully received by my patients and is warmly recommended. All sequestrae, dead spicules and necrotic tissue must be thoroughly removed. The Carrell-Dakin technic with Balkan frame suspension and Thomas & Hodgen splints has saved many limbs which would otherwise have come to amputation. Despite some published statements to the contrary never plate or bone-graft a fracture in the presence of any infection.

Delayed union is to be overcome by irritating the fractured ends—usually by the functional use

of the part. The leg or arm can be so fixed in a plaster cast or brace that the patient can use or walk on the fractured part and usually after a few months the union is complete. Delayed union, with mild infections and fistulae, can be treated as above after the necrotic tissues have thoroughly been removed with a curette.

If, after six months, bony union has not been attained, then the condition is one of non-union and more radical measures must be resorted to. Infection, osteomyelitis and sequestrae, must be attacked radically and the parts brought to the stage of complete healing before any attempt can be made to unite the unhealed fracture. Our chief reliance has been upon the resection of the ends of the fragments, opening up the medullary cavities and internal splinting, preferably by means of a bonegraft. Bone defects can be bridged over by bonegrafts which, for this purpose at least, must be autogenous.

These operations are followed by careful fixation in a long plaster cast reaching well above and below the seat of operation. Full, solid union is seldom obtained under six months. Metal splints are not suitable for the treatment of ununited fractures.

Excessive callus near a joint is to be excised; malunited fractures resected and realigned; marked deformity and stiffened joints corrected by the usual orthopaedic procedures. Painful adhesions in joints—painful stiff joints—are not to be broken down under anesthesia. The resulting ankylosis is usually worse than before the operation. After the joint has once become painless, which is taken as proof that most irritation has ceased, forcible redressment is another matter.

Tendon defects can be replaced by facia grafts, while skin defects are covered by skin grafts of various kinds.

Scars are to be resected, incised or freed up as the case warrants and as soon as possible after any of these corrective operations, the muscles, tendons and joints freed from adhesions and oedema, and the proper circulation of the limb restored by the use of hydro, electro and mechano-therapy, combined with massage.

A few words on the importance of the proper circulation in the injured part. From the moment of injury every care should be taken to avoid circulatory disturbances. Upon the integrity of the circulation depends the life, recovery and final use of the injured member. Tight bandaging should be avoided. For some unknown reason trivial injuries often give rise to severe circulatory disturbances; for instance a weight rolling over foot, without fracturing any bones or even breaking the skin, can at times cause profound circulatory changes and osteoporosis.

Prolonged soaking of the part in a hot whirlpool bath is the first step in hydro-therapy.

Stimulating baths and douches follow at the proper time.

Electrical stimulation of weakened muscles produces a gentle form of massage; while carefully graduated exercises in a Zander or other machine, redevelops the muscles still more. Finally full massage, active resistance exercises in appropriate apparatus, etc., follow, and should be continued even after the patient feels himself able to take up light work.

Work itself is now being used as a therapeutic agent; while vocational re-education for those who have been so severely injured that they cannot follow their old occupation, completes the therapeutic cycle and salvages the industrial and traumatic cripple.

#### RESUME

Infection must be avoided at all costs by thorough asepsis, the avoidance of needless operating and perfect fixation during the stage of *first aid*.

Fractures must be *thoroughly reduced and accurately fixed* in appropriate positions. Extensive use should be made of all the modern forms of extension: Steinman pin, Caliper tongs, Balkan frames, and Thomas splints. All fractures should be radiographed for study and record.

After the danger of infection has passed, corrective operations can be safely performed.

Closed fractures are not to be unnecessarily opened up. End to end apposition of bone fragments is not a *sine qua non* for a good functional result.

Ununited and malunited fractures, deformities, scars and defects can be overcome by well chosen operative measures.

The benefits of hydro, electro and mechanotherapy, massage, active and passive exercises and functional re-education are to be made available for the injured worker in order to rehabilitate him back into industry in as short a period and in as good physical condition as possible.

821 SCHOFIELD BUILDING.

#### DISCUSSION

DR. JAMES F. BALDWIN (Columbus): Dr. Stern sent me a few days ago a brief transcript of his paper, and I read it with great care. It is a first-class paper in every respect and ought to be read by every surgeon in this and every other society. He makes some very valuable points and emphasizes them. They ought to be re-emphasized.

I want to particularly commend what he says about Lane plates and other foreign bodies in the treatment of fractures. I have taken out a good many Lane plates; I have never been guilty of putting one in. I have used bone-graft with the utmost satisfaction, I have used catgut, kangaroo tendon to temporarily hold bones in place with great satisfaction, but I have never yet put a metallic body in or anything of the kind without arrangements to take it out in a very few days.

Also I wish to emphasize what he states about the treatment of these fractures within a week or ten days. We should wait until local union is established. I know within a short time some one has written favoring more early operation, but he has a lot of arguments against him. I do not think it is good practice. I think it is safer to wait.

So, in the treatment of ununited fractures, many of these are delayed fractures, not ununited. Give the patients time and the bones will unite. Only yesterday one of our bright young surgeons was telling me of an experience with the State Industrial Commission. There was a patient with an ununited fracture who put in his claim with the State Industrial Commission. As is usual in such cases, it was some weeks before the commission reached the matter. In the meantime, the fracture united.

The men who are going to treat these cases most successfully, the orthopaedic surgeons, the plastic surgeons, are men who are largely born not made. A man must have something of the artist about him that he can see in his mind's eye the conditions present and what he expects to secure. This was emphasized recently when a surgical friend told me of a Boston surgeon who had gone abroad, entered one of these hospitals for this plastic work. He stayed there six months and was honest enough to throw up his hands and come home. He said he couldn't do the work, he couldn't learn how, the artistic was not in his make-up. He could cut off arms and legs, he could open abdomens and remove appendices, but he wasn't built to do this plastic work, and comparatively few men are.

There is a broad field, and we need more men of the skill of Dr. Stern and others, who will take up this work for the army of men coming home from the war and the army of men continuously recruited from our industrial establishments.

DR. BOOTH (Youngstown): I am very sorry to disagree with my neighbor, Dr. Stern of Cleveland. I live in Youngstown, Ohio, and we are pretty close now that the roads are getting good.

First of all, I want to say that I think that bone surgery that prevents bad results, that keeps the orthopaedic surgeon from having to get to the people, is the greatest surgery in the world today. It is simple work to take out an appendix or do a gastro-enterostomy or something of the sort, but when you come to treating compound fractures to prevent deformities, you have the biggest job on your hands that you ever tackled.

Now, in regard to the treatment of compound fractures, we will go back a little. The first thing is our technique. If you all learn accurately and teach your nurses and the whole hospital the Lane technique, I believe from a long experience in treatment of compound fractures that the time to prevent deformity in compound fractures is at the time of the accident.



Recently, I have been plating every compound fracture that I have had in the leg or thigh with almost perfect success. I always get a leg the same length. I may get an infection, but if you use the Lane technique, and do not allow any one to touch your instruments at all, you are not going to introduce any infection in your wound. If an infection develops, it was there before you came to the case. You cannot introduce infection in the wound if you handle your technique correctly.

Recently, I have been mechanically fixing every compound fracture that I have had where there was a tendency to displacement, every one, and closing them right up tight. That is a pretty big statement to make, but, gentlemen, it is true. I have had some infections following it, but I have gotten a leg the same length as the other, and I have always gotten a good functional result.

Now, as to this matter of local leukocytosis,—we have to have that or our bones would never heal together. You who have treated simple fractures and had accurate adjustments of your bones never got very much inflammation or swelling. It is only in those cases where there is a displacement of bone or a large amount of laceration of tissue that you get your great leukocytosis and your great amount of swelling. A bone that is properly adjusted will not give you a large callous. You will scarcely notice the callous in a tibia, in a square fracture, where it has been kept in position, and the same in all other bones.

Now, I want to use that leukocytosis the very first few days when it comes. I want to be right on the ground to use it, and I want to use it to heal my bones when they are in position. For instance, in the treatment of a Pott's fracture or a complicated Pott's fracture, where you have a fracture of the ankle—you get all sorts of deformities. I am not talking about a compound fracture now; I am talking about a simple fracture. Will you put the patient in a splint, put him to bed, and at the end of a week perhaps adjust it? No, you won't, and no other man ever did. You can't do it. After nature fills up all those crevices with exudate you can't get those bones in active position. The way I advocate doing that is at once, within an hour, or as soon as I can get to the hospital. I put a plaster of Paris splint right on that ankle, I pull that ankle down and while the plaster is hardening, I get my hand on each side of each malleoli and I press it together as hard as I can. The result is I have a perfect adjustment of those fragments. I saw it open then, of course, and put on a very light bandage, but I have my parts in place and they will stay there, and you will get an ankle that you can scarcely tell in six months which one was broken.

DR. HOY (Columbus): I think one of the nicest things that I ever heard Mr. Lane say in reference to his Lane plate was a very short sentence, that the Lane plate should be put in with

the cortical cell. Lane plates, to my mind, are the most valuable thing that we have today in the treatment of fractures outside of the autogenous bone transplant in non-union.

A man may be an excellent abdominal surgeon, but he may be a poor bone surgeon. Lane plates put in properly do not have to be removed as a rule. I will make that as an unqualified statement. One reason that Lane plates have to be removed is, that Lane plates are put in compound fractures. Lane plates should never be put in compound fractures, neither should compound fractures ever be wired, plated or screwed.

Simple fractures can be taken care of properly without any operation at all as a rule. It is very seldom that there is an operation indicated in the treatment of fractures. Of course, as the doctor has stated, you do not always get a perfect anatomic result, but you can get a perfect functional result, and, if the X-ray man tells you you are off a quarter of an inch, you should worry, as long as the patient feels good about it and you feel good about it.

Murphy said at one time a man should wait always until a compound fracture is healed up, you should wait at least six months, and during that time you can administer autogenous vaccines, and after he has been healed up six months, you can fix that up.

In regard to this time of waiting. At first, there is a hemorrhage in and around the ends of the bone and between the muscle cells. The reason that you wait is so that nature has time to absorb these leukocytes. Then this is coffer-dammed and ruled off with a bunch of granulated tissue and you can go in with perfect safety.

DR. HALDERMAN (Portsmouth): I think that we are departing a little bit from the actual subject of Dr. Stern's paper, but the reason why I will impose upon you for a few minutes is that I want to endorse his views most heartily.

After an experience of twenty-five or thirty years in the treatment of fractures, during which time I doubt very much that I have ever been without a case of fracture under my care, as I think I can prove by several gentlemen in the house, I want to say this about the operative treatment of fractures—I can't add anything particularly, but I want to endorse what the essayist has said and what Dr. Baldwin has said.

Several years ago, after Mr. Lane visited this country and offered his treatment of plating for fractures, I had several cases on hand at that time, and I felt that I wasn't up to date, that I wasn't treating my fracture cases just right, and that I would have to get a move on myself and learn something about this operative treatment or I would have to retire. I made a trip to Philadelphia. I went over to the University Hospital and I stayed there for some days and had an opportunity of seeing the work of Dr. Martin in that institution and seeing some of the results. I went back home satisfied that my

method of treatment was as good as the operative treatment if not considerably better. My results had been good, so far as function was concerned, and the union had been more rapid, the cure had been earlier than the operative treatment.

It was being discussed there at Philadelphia and was still under discussion, and it was not agreed by the men there who were doing the work that it was just exactly the treatment.

In this connection, I want to say that after two or three years of the operative treatment of fractures by plating, Dr. J. B. Murphy said that before the operative treatment of fractures, about ten per cent. of those cases did not recover; that since the operative treatment, Lane's treatment, thirty per cent. were failures.

Now, I do believe that some men are particularly skillful in the operation of those cases, but I think many cases have been operated, according to my observation, that would have done better if they had never been touched. I don't mean to say that some of those patients might not become operative cases, but in the first place, if we follow the works on surgery, they tell you that a fractured femur should be done up from six to eight weeks. That is all bosh. If you haven't got union of a fractured femur in six or eight weeks, you needn't be surprised. It would be the exception rather than the rule, if you did, and often if you think you have union of a fractured bone of the femur in six or eight weeks and take off your appliances and turn your patient out, he will come back to you in two or three weeks with a bend in his union.

DR. C. E. CALDWELL (Cincinnati): There has been so much discussion on this subject that I hesitate to add even a few words. I think probably the controversy on fractures will continue as long as fractures are treated. Undoubtedly all of us have our opinions as to when or when not to resort to interference. I wish to place myself on record as being unalterably opposed at all times to interference in the majority of cases of fractures. I believe a proper understanding and study of the injury will result in the treatment without the operation.

As to the use of the Lane plate, I very frequently use the Lane plate when it is necessary, with the distinct intention of removing that plate after it has been put in. I have plates that have been in five or six years and have never given any trouble. On the other hand, I have had plates in two or three weeks and the indication was that the best thing to do was to take out that plate.

As to the use of the graft, I think many of us who have very much work around about the lower part of the leg, around the ankle, for very bad deformities, know it is impossible in some of those cases. As some one has said here, you work hard to get those fragments into apposition, and when you have them into apposition, you haven't any room to do a bone graft. The best thing to do under those circumstances is to put on a super-

ficial Lane plate, with the distinct intention of removing that plate within a few weeks, when the bone has become sufficiently united. In those instances, I find that the results are very good, the apposition is good, and there is absolutely no harm done to the patient.

So with regard to those fractures, sometimes things can't be figured out without plating. For instance, the spiral fracture won't hold together, and in fractures around and about the shoulders. I had recently a case where the lower fragment was way up in the arm pit, and with the greatest abduction to be had, I could not pull that arm into place. An X-ray was brought to the bed. I worked over that for half an hour and put in a plate, and in about four weeks took the plate out again with perfect facility.

DR. FRANK WARNER (Columbus): I have listened with much interest not alone to the paper of Dr. Stern but the discussion here, and, with the balance of the gentlemen, I can only offer words of encomium to Dr. Stern's paper, and yet when he comes to talk about preventing infection at all costs, I deny that this can be done. Indeed, you can prevent infection in many cases, but you cannot prevent infection in all cases. Often the infection is so engrafted at the outstart that it is impossible to prevent it. There have been many methods, of course, to prevent it. The Dakin solution is one, the iodine cleansing of the wound another. St. Cyr, the Frenchman, in some eight thousand cases of wounds, encouraged the outflow of lymph by a saline solution, so as to drive out whatever of the bacteria may have gained entrance into the lymphatic system. In that way, he made a most splendid showing. Of course, it is most commendable to try to prevent the infection, but you must concede that to be successful in anywhere nearly all of these cases is impossible.

Now, one word as to the Lane plates and the bone plating. The Lane plates or the bone plating should never be done in these open wounds, nor should it be done soon after a wound has undergone suppuration, because you get suppuration again. I had my eyes opened most wonderfully after having plated a number of cases, in which some did not turn out well. When I saw Mr. Lane plate, I did not wonder not alone that my cases did not turn out well, but I did not wonder that none of the cases had turned out well that I had ever seen plated by any of the surgeons before seeing Mr. Lane plating them.

Mr. Lane plated his cases with infinite care, but for all that he occasionally got bad results. Then I made a number of Lane plates, following that real technique, and they have stood for years now without having to come out.

Now, one word with reference to the suturing of nerves. As a rule, it is probably well not to suture nerves at once, and yet in some in which there is a great deal of destruction of tissue and nerves cut, I would do it. I have in mind a case



in which the ulnar nerve was crushed in two or cut in two, I sutured this nerve together, wrapping about the fascia and fat, and this resulted in a perfect cure despite the fact that intensive infection followed in the wound, and a perfect functional result finally ensued in the right arm.

DR. BLOWER (Akron): I want to say a few words in regard to the Lane plate. Dr. Baldwin got up and spoke about it, and he kind of took the nerve out of me for a while. When Dr. Hoy and Dr. Booth made their statements, I decided to get up here and call attention to one point in Dr. Stern's paper which I think is a little bit out of the way, as far as my experience has been concerned, and that is the application of metallic substances or plates by the eighth day. I am afraid to put a plate in a wound before the twelfth day, and have always been afraid to do it.

Another point that I should like to bring out is in regard to the application of bone clamps. I have seen men put on bone clamps and in doing that they have traumatized the tissue all around that bone for at least three inches. If the Lane clamp is used, the Lane forcep, it is unnecessary to strip the muscles and the periosteum from around that bone. You can get the fragments in position, put on the Lane plate and not have near the amount of traumatism.

Another thing I want to call attention to is the closing of the fascia in these wounds. The fascia should never be closed tightly. The serum in and around that bone should be allowed to get to the fat beneath the skin. The skin should be closed tightly. Muscle will not absorb serum, nor will it absorb blood. The fat beneath the skin will do that. I have never had to take out a bone plate in five years.

I am rather surprised at Dr. Booth putting in bone plates in compound fractures early. If he does that, he has cleaned up his wound before he does it, but I should hate to put in a bone plate before the twelfth day. As I say I have never had to take out a plate, and I still believe it is the proper treatment.

DR. ROBERT CAROTHERS (Cincinnati): I arise to commend Dr. Stern's paper. I think it is one of the best I have ever heard, and there are just two points which come to my mind. One is the type of man that is going to treat fractures. A man to be a successful treater of fractures, if you will excuse that expression, is a man who has plenty of imagination. He has got to have the artistic temperament. He also must have a lot of mechanical ability. I feel that that is the type of man that is going to treat fractures and treat them successfully.

A man who depends on Lane plates is not going to get very far in the treatment of three or four hundred fractures. I wouldn't say that a Lane plate never is to be used, but it is very, very seldom to be used. I have been around a very great deal in the last four or five years, and it

seems that fractures have come into their own, especially in the medical societies, and if there is one thing I have learned in medical society meetings it is that there are very few men who can treat fractures.

DR. H. T. SUTTON (Zanesville): I have had quite a little experience with the Lane plate, doing one occasionally for quite a number of years, but plating or any other kind of patching up of the bones should not be resorted to until everything else has failed. In fact, I don't think that I have ever done a plating until after an attorney had been called. I have in the hospital at Zanesville today a young fellow who came with his hip broken eleven weeks ago, with two inches and a half shortening—the ends overlapped and before he went to the operating room, he asked that I telephone to his lawyer. He wanted to speak to him before I started. It wasn't about what I was going to do so much—he didn't have that in mind then, but it was what the other fellow had done.

But the element that I think has made my cases a success has not been referred to. I have not been able to do the technique of Lane or Murphy or perhaps of our distinguished essayist, Dr. Stern. I belong to that class of fumlbers and bunglers that lack confidence in being able to carry out a perfect technique in those cases, so I have always stuck in a little drain. It is a sleeping drain—you can go home and go to sleep with that drain in.

The point that I want to emphasize most is to look into the condition of that patent, see what his condition is. It doesn't matter whether you are a highly trained and skilled surgeon, but that patient's vitality must be up to snuff. I am wailing today over one and the only case that I have ever plated because I overlooked that point. I had a most distinguished practitioner of medicine in Columbus in consultation over that case, and he said, "Why, Doctor, there is nothing to do but go ahead and plate him." I thought when he sat down and deliberated a moment before he spoke he was going to say, "You had better wait a while," and I was going to accept his advice. But it had not dawned on me that this man had a compound fracture and had gone through six weeks of infection and suffering. To be sure, he was a rugged country fellow when he was injured, but he had gone through this long siege of suffering, and he was brought into the hospital by a couple of my friends from a neighboring community. I gave him all the thought I could, but I thought he would pull through. I was afraid to let him go. Perhaps, among other things, somebody else would grab him up and make a worse job than I would make, but I plated that poor fellow, and just a couple of weeks ago I put in my little drain. I never had been so careful about my technique before in all my life. I cut, as I always do, a window in the cast.

Next morning, here was the whole leg in a blister. Then I said to myself, "This has been

an awful mistake," and I admitted it to the patient and to the friends, and when this doctor was sent down by the corporation that this man was working for to see how the patient was getting along, I said to him, "Doctor, we have made an awful mistake in this case. This man should not have been operated upon for three months, or perhaps six months. He has just gone through this terrible siege of infection. I didn't expect you at a passing glance to realize that, but I had him there two or three days, and I should have recognized it."

I want to say to you who belong in my class, if there are any, the fumbling, bungling class, that when I get ready for one of these operations, I get my team the night before, or the morning before, and I tell them this and that, "You must not touch that wound at all with your hands, you must not touch my instruments, and you must not do this and that," and I get very impatient at the beginning, but by the time I get under way, I tumble the most important instruments on the floor and find myself in the wound with both hands, and yet I have not found it necessary to remove any plates. I am willing to. I would like to have the plates back, but why remove the plate when it is doing no harm?

At the Zanesville Hospital, a man came in recently with a Lane plate in and he remarked, "That thigh is solid as a rock, and I don't know where that plate is." I said, "I may want to take that off," and he said, "What do you want to take it off for? That is going to be the proudest boast of my life that I have that Lane plate in there."

DR. ROY MCKAY, (Akron): It seems to me that this very excellent paper of Dr. Stern has degenerated into a discussion of hardware. You are overlooking one of his most important points, I think. It matters not what method you use of fixation, whether the soup bone or the hardware or the autogenous bone-graft, there is one point that must not be forgotten, and that is that the same retentive treatment must be applied as though none of these methods were made use of.

In the treatment of fractures, where there is a displacement, there is of necessity opposing muscle pull. There is a certain point in that muscle pull that is neutral. That neutral point must be attained in disregard to the bone, the line of fracture or its direction.

There are certain fractures of long bones in which, in my experience, I have been utterly unable to neutralize that muscle pull. Given a fracture in the lower third of the femur, with the obliquity running from before backward or below upward, in my experience I have been wholly unable to hold that fracture in position.

Now, they have talked about this wonderful technique of Lane's. To my mind, there is only one thing about Lane's technique that is wonderful, and that is that any one would be so impractical as to use a technique that is so rigid,

that is not applicable to the ordinary walks of life, when it is perfectly possible, not only possible but practical, to use an autogenous graft in any instance, I don't care what it is, without this impractical, illogical technique.

I don't believe there are very many people outside of Lane who succeed in using Lane's technique. I appreciate that this Lane plating has been successful to a certain degree, but it is very interesting that Dr. Baldwin is only one of many individuals who have had occasion to remove a great many more Lane plates than they ever saw introduced into a wound.

But the principal point, to my mind, in treating fractures of long bones, and those are the fractures in which you usually have your displacement, is in using a position in which you arrive at this neutral point of muscle pull. When that position is attained, with the proper traction and proper position, there is practically no difficulty in retaining that fracture in that position.

DR. STERN, (Cleveland): I do not wish to enter into any controversy over any of the details of the principles I laid down in my paper. The paper was more than a paper on whether or not to use the Lane plate, and I purposely avoided entering into that discussion.

If Dr. Sutton wants any Lane plates, I will supply him with quite a few. It has been the privilege of all the orthopaedic surgeons to see the bad results, and we are compelled very often to take out Lane plates. I believe, however, that if we are going to use "Lane plates," we will have to use Lane's technique and use the plates on each and every closed fracture, which as Mr. Lane told me personally, was his teaching. He said to me, "I plate each and every closed or open fracture that comes to me as soon as possible." That is the Lane method. In the olden days, you gentlemen remember we had Murphy's plates, Senn's plates and others. I have nothing against the plating of fractures when *absolutely necessary*, but I do say that Mr. Lane's principles of plating all fractures is incorrect.

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*Gonococcus Vaccine* (Polyvalent) (Gilliland)—A gonococcus vaccine (see New and Nonofficial Remedies, 1920, p. 283) prepared from a number of strains of *M. Gonorrhoea* Neisser. Marketed in packages of four syringes containing, respectively, 250, 500, 1,000 and 2,000 million killed gonococci; also in packages of four 1 Cc. ampules containing, respectively, 250, 500, 1,000 and 2,000 million killed gonococci. The Gilliland Laboratories, Ambler, Pa.

*Ovarian Residue* (Hollister-Wilson)—The residue from the fresh ovary of the hog, after the ablation of the corpus luteum. It is used for the same conditions as the entire ovarian substance (see New and Nonofficial Remedies, 1920, p. 201) but is claimed to be somewhat more stable. Hollister-Wilson Laboratories, Chicago (Jour. A. M. A., March 6, 1920, p. 675).



# The Relative Value of Dry, Wet and Ointment Dressings for Wounds\*

Charles T. Souther, M. D., F. A. C. S., Cincinnati

Editor's Note.—Dr. Souther's plea for the use of ointment dressings for wounds is very interesting at this particular time as one of the most noted medical officers of the British Army,—Col. Robertson, aided by the research department of the Chicago University and the Hollister-Wilson Laboratories, is trying to work out a combination of lipoids and paraffin that will supersede all other forms of wound dressing. The rationale of the new combination is to reinforce the advantages of the paraffin base with those lipoids which in human, animal, plant and soil life seem to be the universal as well as similar protective substances against disease—invasion. This research promises to open an entirely new chapter in the healing of wounds and to challenge entirely the old acceptance of the antiseptic era of surgery. What will come of it remains to be seen but it is to be hoped that those who read this paper will appreciate the fact that the patient's comfort and welfare are very frequently better safeguarded by ointment dressings than by any other method of handling wounds.

**D**RY gauze dressings are ideal for clean surgical cases of almost all types. Many good surgeons use dry dressings almost exclusively. They form a protection from infections and will absorb discharges of all kinds, but in my judgment are not indicated in wounds in which infection is liable to develop on account of the circumstances and conditions prevailing at the time of accident or injury. Dry gauze dressings may well be used in wounds in which suppuration is already established and more especially when the wound is into or connected with any of the serous-lined cavities. However when mucous-lined cavities are involved irritation and greater dressing efficiency will be obtained from some form of ointment dressing, preferably with a heavy mineral base.

Wet dressings are indicated in the presence of cellulitis or when there is much oedema in and about the wound. Moisture helps to reduce the swelling of the parts by a reduction of the temperature and when sodium chloride, aluminum acetate or other salts are added to the moist dressings the effectiveness is very materially increased, especially if the wet dressings are large and are never allowed to get dry, thus maintaining both hygroscopic action and a certain amount of dialysis. The water bath, when it can be used gives better and quicker results in controlling infection than any other method.

## THE UTILITY OF DAKIN'S SOLUTION

The use of Dakin's solution may be classed as a wet dressing but its action should be strictly limited to the wound area and should not be allowed to come in contact with the skin. After seeing Dakin's solution used in thousands of cases in France I cannot say that its results quite came up to my expectations. It was invaluable for removing necrotic tissue and for ridding the wound area of pathogenic bacteria for earlier closure. When the use of the Carrel-Dakin method is carefully checked-up by labor-

atory supervision it may do a lot of good but its indiscriminate and improper use has resulted in definite damage to many cases. When used too strong it is capable of eating away exposed tendons which might otherwise have been saved by an earlier closure, even though primary healing did not result.

There is no doubt in my mind that the heavy vaselin gauze protection to the edges of the wound and the normal skin in the Carrel-Dakin technique does a lot to help these wounds heal. The C-D type of wet dressing should be used only until debridement of the wound is well under way and the bacterial count is from 5 to 10 organisms to the field. Instructions were published in the A. E. F. Bulletin advising that hot saline solution be substituted for Dakin's solution where cellulitis and peri-wound infections develop.

It is always best to remove any foreign body in the wound first, then to use Dakin's solution to remove necrotic debris and sterilize the wound as rapidly as possible for early closure to avoid doing any damage to normal tissues. I am quite sure many will corroborate the statement that Dakin's solution was the cause of secondary hemorrhage in many cases in which vessels were exposed to its long continued action.

## CONTRAINDICATIONS TO WET DRESSINGS

Wet dressings are contraindicated in outpatient clinical work in cold weather because of the danger of freezing. Bichloride of mercury does harm unless used in solutions as weak as 1 to 10,000. Carbolic acid is extremely dangerous even when used in very weak solutions. Boric acid, acetate of aluminium and sodium chloride solutions deserve the most consideration as they are the most efficacious as wet dressings or in the form of baths for all sorts of wounds even when complicated by cellulitis.

## INDICATIONS FOR OINTMENTS

Practically all cases of accidental wounds may be dressed with ointments whether they are to be closed or left open. This also includes fistu-

\*Read before the Surgical Section of the Ohio State Medical Association, during the 73rd Annual Meeting, at Columbus, May 6, 1919.

lae, sinuses, boils, abscesses and mastoid cases that are draining. Almost all of our cases at Evacuation Hospital No. 12, St. Miheil Sector, were dressed with vaselin gauze in and over the wounds, with the exception of those of the scalp, joints, and chest.

#### WHY SHOULD OINTMENTS BE USED

- (1) An ointment dressing facilitates drainage.
- (2) It protects the surrounding skin from the development of dermatitis or eczema.
- (3) It prevents albuminous exudate from getting dry and sealing a wound and stopping drainage.
- (4) It prevents infectious material from being absorbed because the wound is never sealed.
- (5) Accidental hand and foot injuries seldom have any swelling when dressed with ointments due to better drainage and keeping the wound moist and preventing sealing up.
- (6) There is no pain on changing ointment dressings nor any pull on stitches and it takes a very short time for renewing the dressing.
- (7) Epithelium grows faster under an ointment dressing.
- (8) Ointment dressings need not be changed any more frequently than dry dressings, usually not as often.

I have used an ointment dressing in almost all industrial accident cases for some six years past and much prefer it to any other. This includes amputations and all other cases in which the wounds are soiled and in which some degree of infection is bound to be present or at least a delayed union is to be expected. In pre-war times a complete debridement was seldom done in these cases.

Our war experience has taught us all the value of an immunizing and prophylactic dose of anti-tetanus and streptococcic serums, in all cases of compound fracture.

#### HANDLING BAD HAND INJURIES

Given a bad hand injury with crushed and lacerated fingers the following method of handling has given very good results in my own experience.

- (1) Control hemorrhage. It must be emphasized that all instruments and dressings used throughout the procedure must be sterile.
- (2) Obtund the parts by the application of local or regional use of local anesthesia. If pain that will prevent proper handling of the wound cannot be otherwise controlled general anesthesia must be used although local anesthesia suffices in almost all cases.
- (3) Wait at least ten minutes for the local anesthesia to become effective.
- (4) Cleanse the wound and surrounding parts thoroughly with benzine and iodine.
- (5) Remove with a scissors any dead or hopeless tissue.

(6) Repair tendons carefully with chromic catgut No. 0 and suture all structures back in place as well as may be possible with interrupted sutures. Absorbable sutures should be used internally especially when they are to be buried. Non-absorbable sutures are preferably used externally.

(7) Re-apply tincture of iodine.

(8) Dress with an ointment dressing to be removed within 48 hours.

Thus handled even bad cases will rarely show any swelling at the first dressing unless the circulation has been injured. The dressing may be much soiled on account of more than the usual amount of discharge. Cleanse the wound gently with benzine, gasoline, or peroxide and re-apply ointment dressing. Repeat dressings every 48 hours up to a reasonable time for fair healing and then apply twenty per cent silver to areas not healed and dress dry; changing the dry dressing every two to four days.

#### DESIRABLE OINTMENTS

Ointments with a mineral fat base are preferable. Of the paraffin group the heavy, red, cheaper petroleum jelly is best. The white refined vaselin is a poor vehicle because it is more volatile and not as protective to the skin. We found it absolutely inadequate as a protection to the skin in the use of Dakin's solution. To this petroleum base may be added one or more of a number of antiseptics or antiparasitides—yellow oxide of mercury, crude coal tar, calomel, and ichthyol, all in one per cent. strength or one-fourth per cent. salicylic acid, two per cent. boric acid or zinc oxide, all of which have some antiseptic properties. The efficacy attained by bismuth paste and the principles involved in its use speak well for the merits of ointment dressings.

The animal fats are less desirable because they are absorbed by the tissues and tend to let the dressing dry out. Lanolin is the only one worthy of our consideration and in so much as it costs more and is worth less it may be discarded for the purpose in question.

The ointment method of dressings was first called to my attention by the late Dr. M. L. Heidingsfeld, while I spent three months with him in 1902. At first it looked as if his advice was very wrong considering the bichloride teaching I had had at college; but years of experience have made me a convert to some of the dermatological teachings of the older writers and to the value of ointments in dressing wounds.

THE GROTON.

#### DISCUSSION

DR. GOODMAN (Columbus): I think you will agree that a paper of this kind is very difficult to discuss, and I mean no disrespect to the essayist when I open my discussion, as it were, with a little parable, remembering what the old lady said as she kissed the cow—"degustibus non est disputandum"—there is no accounting for taste.



One man uses a certain dressing with splendid results, and you ask him why, and he says, because he gets results. Another man uses another dressing and you ask him why and he says it is because he gets results.

The choice of these dressings, reminds me a good deal of the man who came to the doctor's office. The doctor said, "My dear sir, what you need is exercise. Get out and walk and get the fresh air." The patient said, "I guess I do. I am a mail man." The doctor then said, "Oh, well, then stay in out of the air." That is the way with these dressings. We sometimes use the dry dressing with splendid results, and if that doesn't work, we use the wet dressing, and if that doesn't work, the ointment dressing. It is a good deal like the young lady doing all her cooking with the cook-book. She said, "Grandma, how does it come that I use a cook-book and my cooking isn't nearly as good as yours and you never measure anything?" And Grandma said, "Honey, I just judge that with my mind; that is the way it is."

I don't see how anybody could very well discuss a paper of this kind and state just when he would use a dry dressing and when he would use a wet one and when an ointment, except that it stands to reason that the simplest dressing is the cleanest. The most easily applied is a plain, dry dressing, and yet we know there are many cases where dry cloths would irritate the wound.

I know in many cases which were sent back to the base hospitals, dry gauze was put on and it was stuck, and hundreds and hundreds of such dressings had to be torn off hurriedly and the pain was frightful. At some other places, they put on heavy coating of vaselin, and these came off easily and the patient had no pain at all. Yet I wouldn't want to say in every case I would use a vaselin or ointment, simply because when cases were transported over long distances we got greater relief by the use of vaselin.

I would say for the dry dressing, it hurts sometimes, ointment is dirty sometimes, wet dressing runs over everything sometimes.

I have seen Dakin's solution do worlds of good. It did things that to me at times were marvelous, and yet if you asked me would I use it in private practice, I would say no, because the results would be fearful. We have no way in the average private house, the small house in the country, of having it absolutely tested out every day in a laboratory. If you didn't get it exactly right, you would do more harm than good. The results depend upon having it exactly right. You would go to one camp and they were having the most marvelous results with the Dakin solution and at other places they were having excellent results with bismuth. In other places, the British were having perfectly wonderful results with salt solution.

Now, there is just one other thing I want to say in closing. Some time ago, Dr. Baldwin called by attention to it when I first came back. We had a child who had laid in our hospital for a long time, and that child's grandfather was an army surgeon in the Civil War. He said that during the Civil War, and possibly some of you men served during the Civil War, when they cut off a leg, they simply turned the stump back and let it alone with no dressing at all. I have found that some of the biggest surgeons with some of the best results obtained in the base hospitals on the other side were those who when the leg was cut off, the wound trimmed up and turned back and left wide open, put on no dressing at all. So I say, it is a case of "de gustibus non est disputandum."

DR. WARNER (Columbus): I am very glad Dr. Goodman saved me the trouble of falling out with Dr. Souther in his excellent paper here, by finding some fault with Dakin's solution in private practice. Dr. Goodman saved me this trouble by saying that he would hardly employ it in private practice, although he has seen it extensively employed in military practice. I learn from the literature, too, that some of the most distinguished surgeons in France have not been satisfied with this method of treatment, notably St. Cyr, whom I spoke of, and you will find much material of the same tenor in Penhollow's English work.

Now, I saw a pretty extensive use made of Dakin's solution here right after it was first brought forward, and then I saw it begin to fall more and more into disrepute. I recall that very early in this process, I wrote an article on the "Infection of Wounds." The editor accepted the article but wrote back and asked me whether I really intended to take such radical ground against the Dakin solution, or, rather, the ground of indifference, or, in other words, that its merits had not been proved in private practice.

Now, as a matter of fact, it seems to me in private practice we gain all that could be gained by thorough drainage, and we must never overlook the fact that we must have thorough drainage, and to get thorough drainage often calls for most extensive incisions to get at the bottom of the wound so that we get this thorough drainage. When we get this thorough drainage, then we are not interfered with by the Dakin solution or any other destructive agent there in destroying your lymphocytes or your leukocytes in dealing with the infections. Just as soon as you commence with any antiseptic, you commence to destroy them. Just as soon as you give thorough drainage to the bottom of the wound, you have gained all the advantage that there is to be gained from this method.

I want to compliment the speaker on this matter of suturing back all the parts in these wounds, infection or no infection. You will get just as good results if you look to your thorough drainage along with it.

DR. BOOTH (Youngstown): Infections are the bane of the surgeon always in those terrible wounds that we get. Now, for years I have tried many different forms of dressing, dry and wet. I think the doctor gave us a most excellent paper here, and he uses good judgment in what he has written.

About two years ago, on my return from a vacation, I found my assistant using a solution of salicylic acid on compound fractures where we had been using bichloride. In fact, we had been using almost everything, and some one suggested to him the use of salicylic acid in water solution. He used it and he thought he was getting much better results. I watched him for a week or so afterwards, and I found we were getting good results from it apparently.

So I thought to myself—now, if I could keep this salicylic acid working twenty-four hours a day, I would have something of very great value. Therefore, I presented the matter to our laboratory—we have a good one and a good laboratory man—to experiment in making a solution of salicylic acid in albolin. They succeeded in making us a very clear, nice solution of salicylic acid in albolin.

In every case, at the time we began to use it, we took microscopical findings of the number of germs per field, and every day or every two days, the wound was cleaned up. We experimented

with that for about six months before I said much about it to any one. I found that we were actually getting far better results than we had with the Dakin solution and we had used the Dakin solution correctly as nearly as we could. Our surgical nurses were all instructed how to use it, and we got good results with Dakin's solution, but it was very irritating, and we simply let it go. From that time—about a year now—every one of our surgeons has been using this solution of salicylic acid in albolin. I would say it is not irritating to any of the structures. We use it on fresh wounds. It will clean up the surface quicker, I think, than Dakin's solution without any irritation of the skin.

DR. SOUTHER (Closing): I might be inclined to believe that the last speaker got some of his good results on account of the relation of albolin to vaselin, without any regard to the salicylic acid that it contained. Yet I mentioned that ointments are probably better if they carry a certain per cent. of some one of the mildly antiseptic salts of any variety that you might choose. For instance, I have probably used unguentine as much as anything else. It is a nice ointment, it comes in tubes, it is easy to use in your office, and for the small wound about the hand, it is probably as nice a dressing as any one that you can make yourself.

Dakin's solution does this one thing—it eats away the tissues that have no circulation left,

first. It also terribly insults the normal skin. Now, any solution that will produce an eczema, a severe dermatitis, in six or eight hours, is not a fool-proof dressing that should be spread broadcast over the country and used generally. If it is used up to the time that it has disposed of all the necrotic tissue in the wound and then is suspended, not used any longer, you get very rapid results and allow your wound to heal quicker, but if you keep on using it, it will not only dispose of this necrotic tissue, but it will do definite damage to normal tissues in my judgment. We had at least five hundred cases in our hospital at one time that were directly under my charge, and we were not using for at least six weeks a particle of Dakin's solution in any of these cases, and not a single one of them but what I can truly say did as well as the cases later on did under the most careful administration of Dakin's solution.

I think there is a definite reason and indication for ointment dressing, and that indication is all sorts of wounds which of necessity are infected primarily. They are infected from the nature of the way in which they were produced. That type of an injury, in my hands, has done better with some sort of an ointment dressing, for the reason that albuminous exudate never seals around the edge, the wound drains continuously, you have very little swelling and practically no pain in these cases.

## The Birth of Large Children\*

Magnus A. Tate, M. D., Cincinnati

Editor's Note.—There is usually an explanation for underweight babies, but why some of them when born tip the scale at almost unbelievable weights, is problematical. Of course there is always the human tendency to exaggerate, but even so, big babies with all their measurements accurately listed have become a part of obstetrical literature. Unfortunately, few of those weighing over 12 pounds are born alive, owing to sheer mechanical difficulty of labor, for big babies as a rule are perfectly formed and otherwise normal. It would be a desirable thing if such intensive growth could, in some way or other, be limited in utero, although no doubt the inherent tendency to size would be no respecter of therapy.

**O**BSERVERS and authorities place the average weight of new-born babies at from six to seven pounds, the male child being a trifle heavier than the female. A baby of from eight to nine pounds is considered above the average weight, and the heavier the child, the more difficult the birth, relatively speaking. If a baby be born weighing less than six pounds the causative factors are usually determinable, but why the children reach a weight considerably beyond the normal is usually problematical.

The larger the parents, the larger the child is by no means an infallible rule. A prolonged parturient period also has many argumentative loopholes while the quantity of food and kind of diet, now almost discredited as a causative factor, usually leaves us with an unsatisfactory explanation.

Measurements and weights are at times not accurately taken, and often there is a tendency, mixed with pride, on the part of those concerned to exaggerate as to weight and size. This is

particularly true if the parents or an overly friendly nurse handle the records.

### SOME PERSONAL INSTANCES

My obstetrical practice, both private and hospital, has given me an opportunity of attending and witnessing the birth of many infants, and so far I have never seen a 12 pound child that was born alive. As a consultant, I have attended three cases in which the infants weighed respectively twelve pounds, twelve pounds and two ounces, and sixteen pounds and two ounces. All three of the babies were born dead and it is the last case of this series that I desire to report and place on record.

Mrs. L., of Newport, Ky., had nine children, the first born of which weighed twelve pounds and was born dead. The eighth child weighed twelve pounds and was also born dead, while the ninth child was the sixteen pound baby just mentioned. I acted as consultant during the eighth and ninth births. The second to seventh were normal births with live children. The patient, at the time of the last parturition, was 42

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association during its 73rd Annual Meeting, at Columbus, May 6, 1919.



years old, weighed 325 pounds and was 5 feet 8 inches in height. The husband was 45 years old, weighed 135 pounds and was 5 feet 8½ inches in height. The patient had been in labor 20 hours, 6 hours of this in the second stage, when I saw her with Drs. Gerding and Heisel of Newport, Ky., who were in attendance.

The position of the child was an R. O. A. The child was alive at the beginning of labor and the foetal heart was slowly beating at the time of instrumental interference. When it was found to be impossible to deliver the child naturally, forceps were applied and a version made. Delivery was accomplished with great difficulty. The baby was the size of a well-matured infant of six months and weighed sixteen pounds and two ounces, measured 64 c. m. in length while the width of the shoulders was 25 c. m. The vagina was very capacious and relaxed as the patient had been torn in previous labors and there were no new lacerations, and at no time could the puerperal period be described as other than normal.

#### OTHER STATISTICS

In pursuing statistics I have collected and grouped the following interesting case reports. Unfortunately not all of them are complete and in some there is no statement whether the child was born dead or alive, but whenever there has been no definite record I have taken it that the child was born dead.

R. E. Jennings (*The Lancet*, Sept. 24, 1904), reports the forceps delivery of a male child weighing 13 pounds, the mother of which had had three normal weight infants.

The largest child recorded in 15,166 cases in Chrobach's Clinic weighed 11½ pounds; while in Bandle's the largest child weighed 13½ pounds.

R. E. Lewis (*Boston Medical and Surgical Journal*, 1888) delivered a multipara aged 28 of a baby weighing 15 pounds, 2 ounces.

The largest child reported by Broadhead weighed 15 pounds and 11 ounces.

In reviewing some 37,000 deliveries at Sloane Maternity Hospital, Cragin found records of two heavy weight babies of 12 pounds, 6 ounces and 12 pounds and 3 ounces, respectively.

Lambert's record baby weighed 14 pounds, 8 ounces, while Edgar delivered one tipping the scales at 13 pounds, 5 ounces.

Lusk, in reviewing Bellevue Hospital reports, recorded a baby of 11 pounds while he delivered in private practice with forceps, an infant weighing 15 pounds. He also cites two consultation cases with Walters and Graves in which the babies delivered weighed almost 16 and 18 pounds respectively.

Korman records the delivery of an infant weighing over 21 pounds.

Hirst gives record of two big babies, one 14 and the other 15 pounds in weight.

E. P. Davis reports a 13 pound infant.

A. B. Davis, reviewing 100,000 deliveries, found records of a 14½ and a 15 pound baby.

Playfair cites the case of a Nova Scotia giantess, 7 feet 9 inches tall, who bore her husband, also a giant of 7 feet 7 inches, two children, the first of which weighed 19 pounds and the second 23¾ pounds. Both children were born dead.

DeLee delivered by Caesarian section a 14 pound 1 ounce baby.

William's largest recorded delivery was an infant of 14 pounds 3 ounces.

Bierbaum in "Malformations of the Foetus" cites a case in which the child weighed over 28 pounds.

Gould and Pyle in "Anomalies and Curiosities of Medicine" recorded a baby of 24 pounds, and also reported a twin pregnancy in which one weighed 17 pounds 8 ounces and the other 18 pounds.

Ottega reports a case in which he delivered, by forceps, a woman, who had been in labor 40 hours, of a dead child weighing 24 8-10 pounds. The shoulders of this child measured 19 inches across.

Polak reports the delivery of an infant of 14 2-10 pounds.

Telfair, after reviewing the records of Fordham Hospital, gives 13 pounds 2 ounces as the weight of the largest baby delivered.

Hartigan, of Morgantown, W. Va., (*New York Medical Journal*, 1897), records the delivery of an 18 pound 4 ounce baby, the mother of which was a primipara, 21 years old and weighed 120 pounds. The child's father was a small man.

In 71,151 cases at the Boston Lying in Hospital, Mason found that the largest child recorded weighed 14 pounds 2 ounces.

Good reports a baby of 14 pounds.

Satterwhite, of Louisville, Ky., (*Archives of Pediatrics*, 1897), gives an account of a multipara who had a child weighing 19 pounds with no laceration.

J. H. Hunter, (*Medical Brief*, 1905) reports the case of multipara of 24 years, who, when delivery by vagina was found impossible, was delivered, through the right abdominal side, of a child weighing 20 pounds. The mother died one hour after delivery.

D. P. Belcher, of Sale City, Ga., (*Journal A. M. A.*, 1916), details the following interesting case. The mother, aged 35 years, was a woman weighing about 220 pounds, 5 feet 7 inches in height and measuring 50 inches around the hips.

The pelvic measurements were normal. The previous history was of tree miscarriages. On Feb. 22, 1916, Belcher attempted to deliver this woman of a baby weighing 25 pounds. What made the delivery difficult was the fact that the infant shoulders measured 12 inches across. The child was 28 inches long.

# Coloboma and So-Called Congenital Dislocation of the Lens\*

C. F. Clark, M. D., Columbus

**Editor's Note.**—In a previous paper Dr. Clark discussed in detail two cases of dislocation of the lens. In his present contribution Dr. Clark charts his records of a certain family among the descendants of which both dislocation and coloboma of the lens occurred with surprising frequency. After an exhaustive study of available cases Dr. Clark concludes that both coloboma and dislocation are rarely associated conditions in the same patient and that coloboma of the lens and of the iris and choroid are even less frequently found together. It is quite remarkable how patients with these congenital anomalies can be given the benefits of good vision by painstaking refraction. It is also surprising how excellent the tendency is for vision to remain good if properly taken care of even in the most unpromising cases.

**I**N 1894 I presented to this society the history of a case of binocular coloboma of the crystalline lens with accommodative power retained and a brief review of such cases as I could find in the literature available at that time in the library of the Surgeon General's office, and it has occurred to me that, as these cases are somewhat rare, it might be worth while to place on record the subsequent history of this patient's eyes with an interesting group of other cases which I have had opportunity to study during the past twenty-five years.

Coloboma and luxation of the lens of congenital origin, while perhaps generally regarded as clinical curiosities have, in the group of cases I have had under observation, presented some features which have seemed to me worthy of careful study and, while the advanced students of embryology may have worked out some satisfactory theory which will account for the phenomena observed, certainly our text books and encyclopedias of ophthalmology, in their somewhat stereotyped presentation of the subject, have not offered an explanation which will entirely satisfy a critical observer.

It may be that some exhaustive and scientific laboratory work has been done which will supply a really satisfactory explanation of these anomalies but, if so, I have not had the good fortune to see the reports of the investigations on which such explanations are based and certainly such writers as have based their theories on the occasional instances of association of coloboma of the lens with coloboma of the iris and choroid and who speak with apparent confidence of the imperfect or delayed closure of the foetal ocular cleft as the cause will have to revise their theories to account for the large number of cases which show no evidence whatever of coloboma of either the iris or choroid. The ingenious theories of some eminent writers of many years ago have been quoted in the text-books from year to year as authoritative without being subjected to critical analysis, but I fail to see how some of the cases I have observed can be satisfactorily accounted for or made to fall in with these theories.

## INADEQUATE EXPLANATIONS

Many of us lack the deep and intimate knowledge of the embryology of the eye necessary to

enable us to supply an adequate theory which will account for a coloboma occurring in the upper or lateral border of the lens, or for the existence of a pronounced coloboma of the lens with no defect in either the iris or choroid, but it does not require a deep knowledge of embryology to enable us to detect the inadequacy of the text-book theory which groups these cases together and is satisfied with a glib reference to the imperfect closure of the foetal ocular cleft as an explanation of such phenomena.

It is not always agreeable for learned writers to acknowledge that they do not know but when one finds a manifestly inadequate theory quoted by one standard authority after another he is tempted to say that an explanation which does not explain is often worse than no explanation at all.

## CASE OF EDWARD S.

The case described by me in 1894 was very similar so far as the defect in the lens is concerned to one described by Cissel in 1890. My patient, Edward S., of Marysville, Ohio, ten years of age, had marked asthenopic symptoms and a trembling iris with a marked coloboma at the lower border of each lens. I had his case under occasional observation from 1888 to the time of his death in 1912 and, while there was some slight evidence of premature presbyopia at the time of his death at the age of 34, his lenses had remained quite clear and his corrected vision had improved from 4/18 to 5/7.5—in each eye.

He attended school and reported to me from time to time on account of the occasional recurrence of asthenopic symptoms. These were relieved by a careful correction making allowance for the changes in his refraction which seemed to vary from year to year and to be due in the main to a gradual change in his lenticular astigmatism.\*

In my report of this case of coloboma in Edward S, made in 1894, I made a rather full

\*I wish to call special attention to this point as I have observed it in a number of the cases of coloboma which I shall report and to contrast it with astigmatism occurring in a case of congenital dislocation in Kenneth A. in which latter case it seemed to be due, at least in part, to the inclination or tilting of the lens which, released from the pressure of the suspensory ligament, also caused a marked degree of myopia remaining about the same for many years.



record of the refraction, both corneal and lenticular and in my studies of the case after the lapse of many years it was interesting to note that while the myopia remained about the same, namely, R. —7.5 sph; L. —5.5 sph; the astigmatism increased from R. —1. cyl. axis  $10^{\circ}$ , L. —2.75 cyl. axis  $170^{\circ}$  in 1894 (at which date the corneal and total astigmatism were practically the same) to right, —3.50 cyl. axis  $180^{\circ}$  and left —5.5 cyl axis  $180^{\circ}$  in 1912. An increase in the total astigmatism in the right of 2.5D. and in the left of 2.75D. manifestly due to a change in the *form* of the lens. While in the case of congenital dislocation in Kenneth A. referred to above there was, apparently owing to release from the pressure of the suspensory ligament, a considerable degree of myopia and a modification of the astigmatism apparently due to tilting of the lens.

#### DIFFERENCES BETWEEN COLOBOMA AND DISLOCATION

Both of these cases were in boys who were under observation for many years, whose lenses remained clear and who had good vision when their varying refraction was properly corrected. In one there was a marked coloboma in the lower segment of the lens in each eye while in the other the lenses were dislocated upward and slightly outward. The changes actually observed in the refraction of these cases were apparently quite consistent with what we should naturally anticipate if we observe with care the phenomena of coloboma and congenital dislocation and the point of great interest to me was that in spite of their deformities the lenses remained clear under the observation which was maintained for a series of years.

In the case of coloboma, the lens remained in the normal position but slowly changed its form while in the case of dislocation it changed its position as well as its form, and in the latter case I would call attention to the fact that in congenital subluxation, so long as the anterior surface of the vitreous body maintained its normal curvature, the movement of the lens is apt to be such that its posterior surface slides on the wall of the lenticular fossa and the lens consequently tilts forward at such an angle as to produce a degree of regular astigmatism. While there are great variations in the size of the colobomata and the degree of dislocation in the cases I have had the opportunity to study, the two cases referred to above may be taken as in a degree typical and I will only refer briefly to a few of the others which present some interesting points.

Out of a total of eleven cases of this class occurring in my practice during a period of thirty-five years, eight had coloboma and four had congenital dislocation, in one case both coloboma and dislocation were found in the same patient, and, while the text books and encyclopedias almost invariably speak of coloboma of the

lens as associated with and dependent upon the same causes as coloboma of the iris and choroid, in not one of *my eleven cases*, and a considerable number of instances in which coloboma of the iris and choroid were observed, could I find the two conditions associated. I am again calling attention to this point as I wish to emphasize the fact that an ingenious theory concerning a somewhat obscure histological subject, if proclaimed by some high authority, will go unchallenged for years though a careful analysis of the facts may afford no warrant for its acceptance.

#### CONGENITAL ASPECTS

Of the eleven cases referred to above, it is interesting to note that seven occurred in the descendants, in two generations, of one man and that there is room for a strong suspicion that both he and his father had similar trouble. The record of this interesting family will be found on the accompanying chart in which an effort has been made to present the relationship of the various members of the group in as condensed a form as possible.

A number of these patients have been under observation for periods varying from six to twenty years and, as in most instances the lenses have remained clear and in other respects the eyes have been normal, they have afforded an opportunity to study the variations in the refraction of an eye which may be supposed to accompany certain changes in the shape of the lens, apparently resulting from, *first*, the absence or relaxation of a sector of the suspensory ligament as in coloboma; *second* (in luxation), the increased rotundity of the lens increasing its refractive power, and *third*, the astigmatism resulting from the inclination of the axis of the lens as, in its luxation, it follows the curve of the lenticular fossa.

To follow and accurately account for all of the optical phenomena resulting from slight changes in the lens or its position in the lenticular fossa would demand a degree of skill to which I lay no claim, but a simple record of some of these cases will, I think, be of interest.

#### SYMPTOMS IN COLOBOMA CASES

Even in the cases of small colobomata or slight subluxation asthenopic symptoms were not uncommon and a revision of the refraction from time to time gave marked relief. The degree of accommodative power retained in spite of a large coloboma and marked trembling of the iris was quite remarkable, but when the refraction was accurately corrected it was still more remarkable to see how much comfort the patient would obtain and one would be surprised to see *how slowly* variations in the refraction of the lens took place. The best demonstration of these changes in coloboma of the lens was found in the case of Edward S. mentioned above, which case was first reported to this society in 1894.

In the H family illustrated in the chart, whose members demonstrate so fully the various possibilities of coloboma and dislocation, there are shown among the younger generation two cases: Miss Jewell H. (5A) and Miss Bertha A. (8A), who, in spite of their well-marked colobomata have good accommodative power, astigmatism which has remained practically the same since they have been under observation and, when corrected, practically normal vision. Miss Jewell H. (5A) has been under observation for six years and her cousin, Miss Bertha A. (8A), for seven years. A third member of this group, Miss Millie H. (5B) has been under observation for some sixteen years but, as she was very young when first seen, the refraction was not accurately worked out at that time, and there seemed to be a degree of amblyopia, the vision with a correcting lens being only 6/15 right and 6/20 left, but after wearing an approximate correction for fourteen years, she was able in 1917 to obtain almost normal vision in each eye:

R. —2. sph. —2. cyl. axis  $180^\circ = 5/4$ —

L. —2.25 sph. —3.5 cyl. axis  $165^\circ = 5/6$ —

and this remained practically the same when she was last seen in March, 1919. These three are still young people and, if I may judge by my experience with other cases, I would be inclined to look forward to somewhat marked changes in the astigmatism of their lenses when they are a little older.

#### PRESERVATION OF ACCOMMODATION

In a few instances, generally rather late in life, opacity has developed in the colobomatous lens, but in most of my cases, the truncated border of the lens has been apparently clear and free from evidence of any disease or disarrangement of the lens cells resulting in opacity. While in congenital dislocation of the lens it is not uncommon, as in the case of Kenneth A. (6A in the chart) to find on the lens border the remains of the stretched or ruptured fibres of the suspensory ligament, I can now recall no case of coloboma in which such evidences of a suspensory ligament were to be found and in the larger colobomata the truncated border while rounded and thick was smooth and clear. I fail to understand how, if our commonly accepted theories of the mechanism of accommodation are correct, we can have the suspensory ligament absent over as much as one-third of the periphery of the lens and still have only a moderate degree of astigmatism and good accommodative power. This would seem to cast some doubt upon the theory of so-called dynamic astigmatism due to contraction of a sector of the ciliary muscle.

In only two of my cases, Tillie M. (2) and Millie H. (5B) in the chart, were the colobomata large, and in Tillie M., 47 years of age, cataract was so far advanced when she was first seen that a study of her accommodative power was of course out of the question.

It is not difficult to understand how the normal tension of the suspensory ligament can maintain the flattening of the elastic lens of a young person and allow of a fair degree of accommodation in the relaxation accompanying contraction of the ciliary muscle even in the presence of a small coloboma, but it would give me great pleasure to hear from some of the members of this society who have given attention to the problems involved in the physiology of refraction and accommodation as to how, when one-third of the lens periphery is no longer connected with the ciliary muscle, we can still have good accommodative power.

In one case in this family, J. O. H., a man of 55 (No. 5 in the chart), we have a small semi-circular coloboma of the lower border of the lens associated with dislocation upward and somewhat advanced cataract. This man is the father of two of the girls mentioned above, Miss Jewell H. and Miss Millie H.

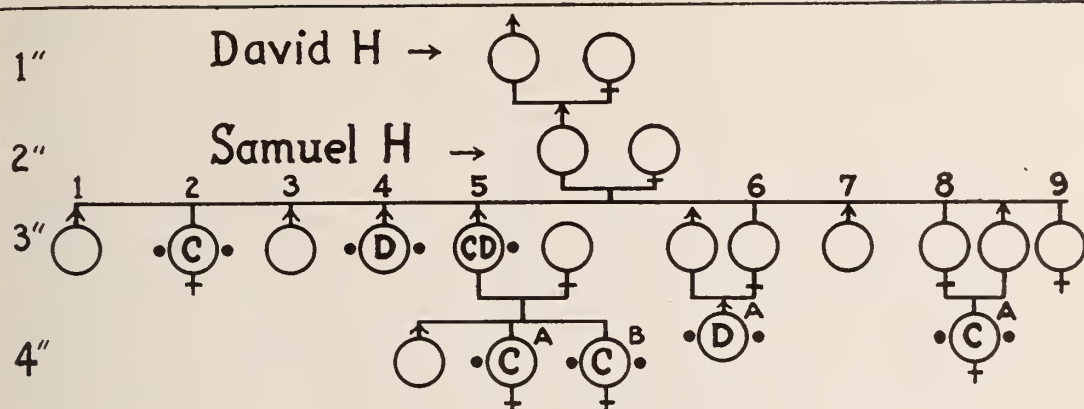
The surprising conditions that may develop in the life history of a case of congenital dislocation of the lens are well illustrated in Mr. M. R. H. (No. 4 on the chart), whose case was described in a previous paper on "Dislocation of the Lens." As he is a member of this family group and his case is a very unusual one, I will briefly present some of the points of interest which bear on the subject under discussion.

On consulting me in July, 1899, this man had partial dislocation of both lenses downward and, while he stated that he had always been "near-sighted," he gave an account of a sudden and very marked impairment of vision following violent exertion. This sudden impairment had occurred in the right eye some four years, and in the left some twenty-four hours, before he consulted me. In the right eye the stretched superior portion of the suspensory ligament could be plainly seen.

Taking into consideration the family history, the account he gave me of the accidents and the appearance of the eyes, I was of the opinion that I was dealing with a man who, like his nephew, Kenneth A (6A in the chart), whom I saw two years later, had a congenital dislocation, probably upward, which, in his case by a sudden jar had been converted into a dislocation downward.

The glasses he had been wearing, R. +2.25 sph.; L. +2. sph. —8. cyl. axis  $180^\circ$ , were evidently given to correct vision through that portion of the lens which remained in the pupillary area, but much better vision was obtained through the aphakic portion of the pupil. This, however, required the use of a strong lens, +15. sph. right and +16. sph. left in addition to the correction of his corneal astigmatism, showing that the eyes prior to dislocation of the lenses were normally hyperopic but a portion of this hyperopia was neutralized by the increased refraction of the more rotund lens released by the luxation from the restraint of the suspensory



C = ColobomaD = Dislocation.

A Dot at the right or left indicates the eye affected.

1'' David H.-Blind 30 years before death. Supposed to have Cataract.

2 Sisters and one brother " " " "

2'' Samuel H.-blind 10 years before death " " " "

3'' 1919.  
1. H.C.H. 64 ?2. Tillie H. Moore 63 Coloboma both eyes—Cataract both eyes.

3. C.T.H. 61 ?

4. M.R.H. 59. Both Lenses dislocated. \* downward.

Under Observation 19 years. Vision Excellent.

5. J.O.H. 55 Coloboma R. Eye. Dislocation R. lens Cataract O.2.

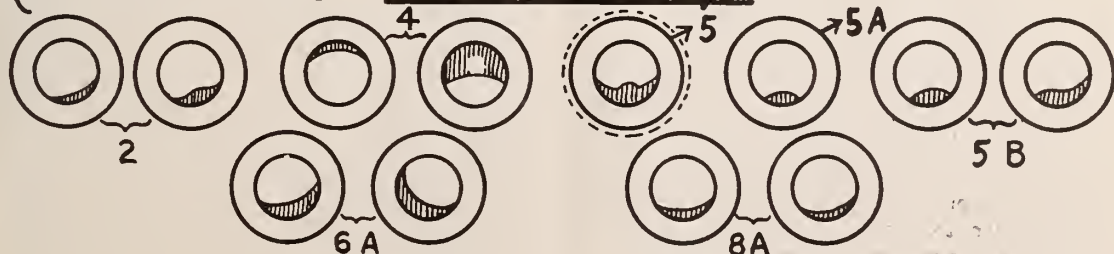
Two Daughters with Coloboma.

6. Sadie H.A. 53. ? Cataract. One Son 6A. Dislocation. O.2.

7. S.D.H. 51 ?

8. Lucy H.A. 68 ? Mother of Bertha A. who has Coloboma O.2.

9. Martha T.K. 70 ?

5. A. Miss Jewell H. 23. Coloboma of Left Eye.4. 5. B Miss Millie H. 25. Large Coloboma of Both Eyes.6. A. Kenneth A. 30. Dislocation Both Eyes upward.8. A. Bertha A. 26. Coloboma Both Eyes.

ligament. It is also probable that the high degree of lenticular astigmatism was at least in part due to the tilting of the lens.

The recently luxated left lens in this patient was still movable and by placing him alternately on his back or having him lean forward with his face down, I could obtain varying states of refraction as the lens was nearer to or farther from the retina, and again on carefully placing his head in the vertical position he could, with proper correction, see well through the crystalline lens but, on shaking his head, the lens would fall low enough to enable him to obtain excellent vision over its upper edge.

Both lenses finally settled to a point one or two mm. below the horizontal meridian and have remained in that position for many years apparently causing no symptoms of irritation and allowing the patient with proper lenses, R. +18.5 sph. and the left +18 sph.  $\odot$  +1. cyl. axis  $15^\circ$  to obtain almost normal vision in each eye. This was in 1903: R. 5/6— and L. 5/5— and in 1919 it was, with the same lenses, R. 5/9— and L. 5/7.5—.

There is some prominence and slight fading of the iris in the inferior quadrant at the point where the lens presses it forward and the pupils are only about 2 mm. in diameter in ordinary light and reduced to  $1\frac{1}{2}$  mm. in strong light and almost straight on their lower borders. A remarkable feature of this case is that, with the strong lenses which he has worn constantly for sixteen years, he has had practically normal vision for distance with either eye or both eyes in combination, and at the same time reads fine print with ease.

Whether this accommodation is obtained by virtue of the stenopæic pupil alone, or by this in combination with the inclination of the strong correcting lense (as suggested by Dr. Risley), I leave for your decision but, on the occasion of his last visit on April 24, 1919, he had with the right

.18—.51  
+ 20. A = ——— and with the left + 20. sph.  
.75  
.21—.59  
 $\odot$  +1. cyl. axis  $15^\circ$ , A = ———  
.75

Since presenting my paper on "Coloboma and Dislocation of the Lens," Mr. M. R. H., who without the aid of a crystalline lens was able to see well at distance and to read fine print with the same lens, again consulted me, and, on examination, I was able to establish beyond doubt the correctness of Dr. Risley's explanation of the mechanism of so-called accommodation in an aphakic eye at least in this case. While with his distance glasses he could read fine print with ease when it lay in a plane fifteen or twenty degrees below the pupil, on elevating it to the plane of the pupil so that his line of sight was perpendicular to the plane of the lens, he no longer had this power of "accommodation."

#### PECULIARITIES OF REFRACTION

The literature of ophthalmology contains many various and curious instances of coloboma and congenital dislocation of the lens, but the phase of the subject which has interested me most deeply is the side light which some of these cases throw on the study of refraction and accommodation. What is spoken of by some writers as dynamic, lenticular astigmatism, the form of astigmatism which changes with the act of accommodation, might naturally be supposed to be modified by a condition of the eye in which a relatively large sector of the lens periphery is left entirely without connection with the ciliary muscle, but we are surprised to find that in some of the younger cases not only is there very little lenticular astigmatism but that, with the refraction corrected, both vision and accommodation are practically normal.

The successful study of this subject requires that we should have our cases under observation from time to time for a series of years, preferably from childhood to forty or fifty years of age. Only a few of my cases approximate these conditions but I hope that some one may be able to follow the future history of certain of these eyes and we may thus learn from actual observation rather than by theorizing what the ultimate effect is when, without other complication, a clear lens goes through its life with a considerable portion of its periphery unattached to the ciliary muscle.

I venture the opinion, subject to correction and revision, that a careful study of the cases of Edward S. (whose record is continued in the early part of this paper from the account given in my first report in the transactions for 1894) and those cases of coloboma in the fourth generation of the H. family as shown on the accompanying chart will warrant the following conclusion: In youth the elasticity of the lens is such that in spite of the absence of the zonular fibers over a relatively large sector of the lens, accommodation for that portion of the lens opposite the normal pupil may be satisfactorily accomplished without a marked degree of lenticular astigmatism being apparent, but as the lens gradually becomes rigid with age (and this age is a relative term) an increasing degree of astigmatism of the lens is developed.

188 E. STATE ST.

*Phenacaine* (Holocaine hydrochloride). The hydrochloride of phenetidyl-acetphenetidine, a basis condensation product of paraphenetidine and acetparaphenetidine. Phenacaine was first introduced as holocaine hydrochloride. It is a local anesthetic like cocaine, but having the advantage of a quicker effect and an antiseptic action. Five minims of a one per cent. solution when instilled into the eye are usually sufficient to cause anesthesia in from one to ten minutes.



# The Study and Diagnosis of Cases Presenting Indications for Bronchoscopy with Comments on Complications Incident to Operation \*

Thomas Hubbard, M. D., Toledo

Editor's Note.—In discussing Dr. Chevalier Jackson's paper on Peanut Bronchitis, at the Atlantic City Meeting of the A. M. A., Sir St. Clair Thompson expressed his astonishment that the average age of Jackson's patients was under three years and he found difficulty in understanding why Americans insisted on raising their babies on a diet of monkey nuts. Dr. Hubbard explains that the majority of infants and children, especially those that are badly trained, are prone to exhibit the ancestral traits of their Siamian forbears, whose mouths are prehensile, by testing and tasting everything. In fact there is scarcely any mentionable article that will go into the bronchus that has not been recovered therefrom. As objects in the windpipe are life endangering in the extreme it is a good thing to have some one like Dr. Hubbard detail the differential diagnosis of a foreign body from other conditions that simulate its symptomatology and also to comment vigorously on the imperiling complications incident to operation. While there should be an educational campaign to train everybody to keep things out of their mouths that are not to be swallowed and to prevent babies from having improper foods, it is equally as important for the general practitioner to know when he is dealing with an insufflated object and his patient requires the services of a bronchoscopist.

IT is not difficult to explain the fact that the majority of foreign body patients are infants and children. To say that "they don't know any better," is merely to admit that a primitive instinct gets them into trouble. A monkey's mouth is prehensile and infants, and particularly badly trained children exhibit many ancestral traits, testing and tasting everything. Mouth habits are encouraged by bottle feeding and all that goes with it. Thumb sucking is a natural sequence of nipple pacifiers and the like. All this tends to cultivate the primitive mouthing habits.

Laryngeal cases are comparatively rare, else there would be more fatalities. The victim of a sudden laryngeal obstruction has a pair of bellows for the emergency instead of only one as compared with a bronchial obstruction. In the latter case there may be little or no tidal air in the invaded lung as the foreign body enters during the beginning of inspiration; but fortunately there is usually enough reserve air in both lungs combined to expel a body from the larynx.

## DIFFICULTIES OF DIAGNOSIS

The symptoms of laryngeal obstruction are usually very clear, ranging from irritation coughing, hoarseness and peculiar voice, to dyspnoea. In one case a chicken bone, thin and triangular, lodged antero-posteriorly, produced a double pitched voice—the only symptom.

Some of these cases present great difficulty of diagnosis. A small foreign body can remain in a ventricle for a long time producing a slowly progressive dyspnoea. One may be driven to diagnosis by exclusion—and that's a long story. A baby of one year developed croupy symptoms over a period of four months. Diphtheria, thy-mus and laryngismus stridulous, were all considered. Finally intubation became necessary.

After a week's trial—several extubations—it was evident that there was no progress and tracheotomy was substituted. No improvement in the larynx resulted. Suspension laryngoscopy two weeks later showed an oedematous, closed larynx. Soon after this, the baby coughed out of the tracheal cannula a very small grain of gravel. The mother identified it as coming from a broken rattle which the baby had had about the time the croupy symptoms began. Suspension laryngoscopy a week later showed that the larynx was nearly normal and that there was a cicatricial bed in one ventricle corresponding to the size of the small piece of gravel. The evidence is quite clear that this was the cause of the progressive laryngeal inflammation. To recapitulate: Hoarseness and croup began in December; intubation was tried in May; tracheotomy soon after. The child recovered after tedious experience in decannulation over a period of several months.

Foreign bodies turn up in a most unexpected way, sometimes complicating other serious conditions. In one case of papilloma of larynx in a boy of five, hoarse and dyspnoeic for two years, I had done what I considered a very thorough removal by suspension method following by fulguration, expecting to remove the tracheotomy cannula soon after. But things went badly and the trachea filled above the cannula with granulation tissue rather than the usual recurrent papilloma. Later this boy coughed out a small piece of apple stem—identified by his father as one he had whittled in a certain way—evidently aspirated by the boy before the operation and undiscovered at operation on the papilloma because it was lower in the trachea. Foreign body surprises like this are very exasperating and, in this case, produced a most serious complication—extension of obstructing granulation tissue into the trachea.

In this connection I will mention another case in which all of the circumstantial evidence and

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association during the 73rd Annual Meeting, at Columbus, May 6, 1919.

symptoms indicated that the child had a fragment of nut shell in a bronchus. The child was found in a state of choking while playing with a box containing nuts and pieces of shells. The symptoms were periodical dyspnoea similar to glottic obstruction from below occurring several times a day. Cynosis of extreme degree with coughing would waken the boy from sound sleep and he had similar attacks in the daytime over a period of several weeks all told. Following each attack, he would choke and swallow and then say that "it was gone down." Physical examination gave evidence of bronchitis with no definite localizing symptoms. I explored both bronchi on two different days with no findings. He was treated for all possible conditions liable to cause laryngismus stridulous, including search for evidence of worms and was given a course of treatment along that line. There was no improvement and he left the hospital after two weeks of treatment quite unimproved.

I learned later than an *ascaris lumbricoides* had been recovered after a thorough old-fashioned course of worm medicine and all symptoms disappeared. I cannot verify this but it is a matter of clinical record that an "eel worm" lodged in the esophagus can cause laryngeal spasm (or even worse in young babies) and this little lad certainly had just such symptoms.

*Laryngeal cases* often require tracheotomy and having the cannula in the trachea, suspension laryngoscopy is the proper procedure in all cases giving evidence of impaction. It is rather cumbersome procedure in ordinary bronchoscopy requiring deep anaesthesia and prolonging the operation.

When sudden glottic obstruction occurs during preparation for bronchoscopy it is not always necessary to do tracheotomy. In some cases the obstructing body can be pushed down into one bronchus and respiration restored by forcing in oxygen into the other lung. The foreign body can then be removed.

*Retropharyngeal abscess* must be kept in mind in cases having symptoms of dyspnoea. Usually diagnosis is easy but occasionally the process is very slow and also the mediastinal glands secondarily infected may cause bronchial pressure. A case of this kind recently seen had first tonsillitis and cervical adenitis, then broncho-pneumonia for two weeks and then a week of progressive dyspnoea, four weeks of respiratory disturbances suggestive at any period of foreign body. It was caused by a suppurating gland in the hypopharynx. The symptoms were not characteristic but an exploratory puncture was ventured. Pus was evacuated and what seemed bronchial obstruction was gradually relieved. This type of retropharyngeal abscess is difficult to diagnose. The dyspnoea was in my opinion due more to the pressure of bronchial glands than to the swelling in the hypopharynx.

*Tuberculous children* may develop a type of asthmatic breathing which suggests foreign body pathology. It is not at all difficult to recall an occasion when the child may have aspirated something and with a definite persistent dyspnoea in evidence the suggestion of foreign body may develop a conviction in the minds of all concerned. Cases of this kind have puzzled me but a careful study of history and temperature with the aid of physical examination by experts and a radiograph will determine if the dyspnoea is due to the pressure of bronchial glands. Lower bronchoscopy, in a case of this kind, would probably aggravate the dyspnoea if due to bronchial glands.

*Thymus dyspnoea* has a clinical history and symptom complex which usually eliminates the foreign body question. Mediastinal neoplasms and abscesses, etc., are rarely suggestive of foreign bodies and infectious processes in and around the larynx are accurately diagnosed by suspension method or by laryngoscopy.

In the early days of *laryngeal* and *bronchial dysphtheria* we used to have great difficulty in determining whether the dyspnoea was due to membrane in the larynx or bronchi—very important then as an aid in prognosis. I think that we can determine this by the laryngeal excursion. The same applies to a foreign body dyspnoea. In bronchial obstruction the laryngeal excursion is not in proportion to the episternal and epigastric recession. If there is time for careful study, this can usually be determined but in critical cases, one has to make the diagnosis at a glance and decide on a method of operation. The rule is that marked dyspnoea necessitates tracheotomy but if one can be reasonably sure that it is not laryngeal obstruction bronchoscopy may be tried before tracheotomy.

#### DIAGNOSIS OF FOREIGN BODIES IN LOWER AIR PASSAGES

All this is introductory to the theme of this paper, the diagnosis of foreign bodies in the lower air passages. In such cases as have been mentioned, the diagnosis and necessity for operative relief are usually clear. The laryngotracheal area is well supplied with sensory nerves and protests in a very noisy way over foreign body invasion.

The lower bronchial area and alveoli are not sensitive. An evidence of this is often observed in lobar pneumonia and pulmonary edema—complete flooding of cells and bronchioles without cough. Foreign bodies well down in a bronchus may be tolerated for some time without any symptoms whatever. In fact a body can be aspirated through the larynx and deeply into a bronchus without causing any irritation.

I saw a lad having a nail in the right bronchus for three weeks exhibiting no symptoms whatever. If the foreign body plugs a bronchus tightly and remains fixed *in situ*, there may be little



or no cough. In other cases there is respiratory inhibition of one lung—a conservative effort of nature to prevent irritation or threatening glottic obstruction by shifting of the foreign body.

The foreign body may be moved about from one bronchus to another and for that reason the interval between examinations (including X-ray) and operation should be as brief as possible. In one case of this nature, a tack was as shifty as a flea. One day in the lower right lobe bronchus and an hour later not to be found by bronchoscope in either bronchus. The next day it was in the lower left lobe bronchus and on operation not to be found in either main bronchus. The third day it was again the lower right on first examination by fluoroscopic method but not to be seen there when the tube was in the bronchus. In the short interval it had shifted into the right upper lobe bronchus which branches off at right angle close to the bifurcation. It was removed by the fluoroscopic method with low tracheotomy, the end of the bronchoscopic tube being accurately placed at the site of the orifice of the upper lobe bronchus by double plane fluoroscopy and then grasped by forceps having right angle blades. Tracheotomy greatly facilitated the straightening out of this right angle, the tube being pried over to the left so that it almost entered the upper right lobe bronchus.

#### MUCOUS FLOODING

Foreign bodies are usually fixed either by primary impaction or swelling. A case like this presents. A child aspirated a kernel of corn—the same having been tossed high in the air and the lad running and shouting, accidentally drew it with force into the bronchus. The right bronchus was thereby neatly corked and the physician soon called reported no air entering the right lung. Forty-eight hours later, I saw this boy and found him perfectly comfortable and free from all ordinary symptoms. The right lung was not only silent but absolutely dull to percussion. I took this as merely a confirmatory indication for operation and did not realize its full significance. The corn was removed easily but the patient was nearly drowned when the bronchus was uncorked. The right bronchial tree and alveoli were filled with the accumulated mucous of forty-eight hours which overflowed into the left. Inversion and forced oxygen finally resuscitated the boy.

One should be prepared to aspirate such cases after removal of the foreign body. It would seem that turning onto the full lung side would aid in preventing a sudden overflow into the other lung. Extraordinary care should be taken in cases presenting evidences of a flooded bronchus. Death would come very quickly if the foreign body slipped from the grasp in the trachea as it would surely plug the other bronchus.

Such cases impress the importance of careful

study of cases suspected to have foreign body. Auscultation should be practiced in all of its refinements and the findings interpreted with the utmost care and particularly with reference to the fluid accumulated in the lung. Impaired motion on one side usually means inhibition to prevent irritation or complete plugging of a bronchus. This is confusing. In other words, rales and sibilant evidences of local trouble may be absent. In fact it is rather difficult to apply the ordinary auscultation rules to these extraordinary cases. Nature may seem to be tricky toward the stethoscope—suppressing rales when she ought not to—and thereby making auscultation findings unreliable. The X-ray, even in non-metallic foreign bodies, combined with accurate interpretation of percussion resonance may give aid in determining the lung condition and the surgical indications even more definitely than the stethoscope.

#### EXAMINING STOOLS AND VOMITES

In this connection I would call attention to the necessity of routine examination of stools and vomites in all suspected cases. Irritation and trauma symptoms may persist after the foreign body has been expelled and perhaps swallowed. In one case a lad of about twelve insisted that he felt the aspirated body in the wind-pipe. It was a dried pea drawn in through a bean blower tube. I could see the spot near the carina (at bifurcation of trachea) where the pea had bruised the mucosa but it had been promptly expelled. Failures to find the foreign body due to spontaneous expulsion and swallowing are not rare. Stools should be washed through a coarse strainer and searched for the foreign body.

#### COMPLICATING FACTORS

In regard to infections and broncho-pneumonia, the fact is that many aspiration accidents of this kind occur because the patient already has a cough. This may mean laryngitis or bronchitis or even whooping cough. Pneumonia is a natural sequence of this aggravation of trauma and infection. Often bronchitis follows aspiration of peanuts, usually more or less mouldy, and the same applies to grass stems, head of timothy and seeds in general.

Operation on such cases is most difficult, anaesthesia must be deeper to check coughing, and there is annoying obscuring flow of secretions. All of these factors enter into prognosis. In my opinion ether does not add much to the operative danger, but it is decidedly more difficult to anaesthetize a person having a bad bronchitis. Copious secretions prevent absorption of the ether, the tidal air is of lower volume in bronchitis and the absorption interval more brief owing to the rapid rhythm. But taking all this into consideration, I think that it is the more important to secure deep anaesthesia and thereby

facilitate rapid, safe operating,—the only chance of saving the life.

#### MULTIPLE FOREIGN BODIES

Multiple foreign bodies are not rare. A child eating peanuts often aspirates many small pieces. One larger one may plug a bronchus and prevent smaller ones lower down from being expelled. This is probably one reason why peanut cases are peculiarly liable to have broncho-pneumonia.

Recently I saw a case of multiple chicken bones in bronchi. This woman aspirated at least two segments of chicken tail. I saw her in the evening. She had the symptoms clearly enough and consented to go to the hospital next morning. In the night she coughed out one piece and the following day another segment was expelled.

#### SPONTANEOUS EXPULSION

This brings up the matter of spontaneous expulsion. A woman came for treatment of bronchitis of about three weeks duration. It seemed an ordinary type but I found on auscultation a bronchitis localized on the left side. I asked her if she had choked on anything recently. She replied in the negative but later remembered that she had choked eating peanuts. I could quite positively locate the foreign body by auscultation and so informed her. Appointment was made for operation next day but she put her mind on it that evening and coughed it out—a half peanut. Recently I removed an impacted piece of bone from the posterior choana of the nose—the same having been aspirated and then coughed out of the trachea.

#### PERMANENT LESIONS

This work has been very satisfactory and as a rule successful and with no mortality incident to operation but occasionally one encounters a contrast case, one that baffles the art and then follows the saddest of all sequences: pulmonary and pleural abscesses with permanent lesions or fatal termination. A little girl aspirated a small piece of tomato stem. It slipped into a small bronchiole and I could not find it. About four months later she coughed out the stem, verifying the diagnosis (made first by her family physician) but now the lung is about all gone in abscesses and she has been drained and resected to the limit and with little hope of recovery. An object lesson like this at the hospital stimulates one to early diagnosis and every effort at timely surgical relief.

#### CHANGES IN FOREIGN BODIES

The changes which take place in foreign bodies are an interesting study. Alteration in appearance may confuse the operator. A dark brown peanut may become a pale cream color in a short time. Silver and brass may tarnish, iron rusts, forming oxide or sulphide (pyrites), cereals soften and even sprout. In hunting for the for-

eign body one need not expect to see the exact color or shape that he has in mind from description given by patient or parents but the mind's eye must be receptive to anything suggestive of the abnormal. The angle of inspection and the rays of illumination produce queer effects.

Fortunately, rusting of sharp iron bodies dulls the point. A staple in the left bronchus ten years looked quite formidable in the X-ray picture, points upward, but on extraction the shafts were reduced to soft friable iron rust that one could crush or bend in the fingers. The real danger was liability of crushing the rusty mass and losing fragments in the sound bronchus. The softening of beans and corn adds to the difficulty of extraction. Foreign bodies in this condition are liable to break into pieces. Corn sprouts in about two weeks and the contents are as soft as corn meal mush. I have removed first a sprout and then a piece of the shell and, finally, the remainder of the kernel. The corn had been in left bronchus more than two weeks.

#### DENTAL CASES

Dental cases of foreign body aspiration are not rare. The dentist may account for all of the teeth extracted under general anaesthesia but occasionally a fragment of cement or filling or a piece of an instrument may slip away and be aspirated. Fortunately the X-ray will almost infallibly locate foreign bodies of this nature.

#### CONCLUSION

It is evident that the success of bronchoscopy is, considered broadly, largely a matter of early or timely diagnosis. By that I would imply that there is still a considerable mortality labeled pneumonia or pulmonary abscess or croup due directly to undiagnosed aspirated foreign bodies. Children and infants do not always advertise the fact of this kind of an accident and may slip unsuspected into the pneumonia column. In my own experience I have encountered a number of rather accidental diagnoses verified by operation and one can readily appreciate how easy it is to overlook the suggestive clue in routine study of such cases. When recovery from foreign body in the lung was considered rather a matter of good luck—an affair to be fought out by Nature aided a little perhaps by surgery—there was a perfectly natural prejudice against such a diagnosis.

Now one finds physicians more keen to get the facts, more alert in study and prompt in seeking surgical relief. All this results in educating the people, aids the doctor in early diagnosis, and makes surgical relief more certain.

NICHOLAS BUILDING.

#### DISCUSSION

DR. J. M. INGERSOLL, (Cleveland, O.): Dr. Hubbard's paper has been very instructive, and he brings out a number of interesting points. All of us who have been doing any bronchoscopic work will recognize them. The difficulty in getting foreign bodies into the upper lobes, which



he mentions, and the possibility of decreasing that difficulty somewhat by tracheotomy—his work in this line has been going on for so many years that we all admire it, because of the splendid results he has obtained.

I have had the opportunity of seeing Dr. Jackson do some of this work, and his skill in this line also makes us proud of his accomplishments.

DR. SAMUEL IGLAUER, (Cincinnati, O.): This is perhaps one of the most interesting subjects in laryngology, especially the question which comes up in this paper, which is the question of diagnosis.

Dr. Hubbard has very carefully analyzed the question of diagnosis, and to my mind there are certain things that are very important. The first is the history. I do not think it is ever safe to ignore the statement of the patient, that he has choked on a foreign body. Of course, Dr. Hubbard points out the fact that very young infants may give no history, but there is usually some one around when the accident occurs, and if the family doctor, the general practitioner, makes any mistake, the mistake that he usually makes is in ignoring the history. Of course, the value of physical examination must not be underestimated, and where a foreign body plugs one bronchus or the other, even a novice usually can make out the physical signs of obstruction. But, in the final analysis, there are only two ways of confirming the diagnosis—one is with the X-ray, when you really have a metallic foreign body, or where you have a soft foreign body which has produced a pneumonia; and the other way is with a bronchoscope. Therefore I say that the ultimate test is either the X-ray or the bronchoscope.

Foreign bodies may get into the air passages in a very peculiar manner. I recall very well one case of a man who had a syphilitic larynx, who then developed symptoms of bronchial obstruction and foreign body, and who finally coughed up a piece of his own larynx, which had sloughed and dropped down into the trachea.

While I was in the service we had a private, one of the enlisted men, who said that he had choked on a piece of chewing gum, which he was sure had gone down into his lung. The physical examination was uncertain; the X-ray didn't show anything. The medical supply officer had failed to supply us with bronchoscopes, although we had repeatedly requested them. When he heard of this case, he was very anxious to get a bronchoscope, because he thought that if this man died, the blame would be put on him. But, since the man was in no particular distress, I put the medical supply officer off for a day or two, to get him real nervous, and finally he telegraphed and got a bronchoscope. We made an exploration, but there was no chewing gum.

Another important thing to remember in very young children is that we may have an enlarged thymus and this may produce all the symptoms of foreign body, but the thymus is nearly always visible in the X-ray plate, and it is curable by X-ray therapy.

We should not forget that it is possible for an intestinal worm to crawl up through the esophagus and enter the windpipe, and thus become a foreign body in the air passage.

The subject of bronchial glands is also very interesting, and I recall one patient who on several occasions coughed up pieces of bronchial gland filled with tubercle bacilli. So that a foreign body may not only enter the patient from without, but also from within.

DR. J. W. MURPHY, (Cincinnati, O.): To discuss Dr. Hubbard's paper, I brought several specimens here that will illustrate one or two of

the points that he brought out very clearly. The first was that of the gravel in the ventricle of the larynx. That was a very serious case, extending over some months, requiring tracheotomy, and working with the child not knowing what the cause was. I think here an X-ray would probably have revealed the cause in that larynx, I think the gravel would have showed, and I think it is well to make it a rule in all of this work that we first have an X-ray, if there is any obscurity as to the cause of the symptoms present. Only last week I came very near making a very serious blunder right along this line.

A gentleman seventy-three years old was sent in from a neighboring town, with a suspected foreign body in the esophagus. As an X-ray had been taken and the foreign body located by the roentgenologist there, but the plate did not accompany the patient, I did not take an X-ray but proceeded to take the man's word for the foreign body being there, as it was shown on the X-ray plate. I passed the esophagoscope and found a large aneurysm of the aorta. Now, I subjected that man to very serious risk, as there was great danger of rupturing that aorta. Fortunately, the patient almost sat as rigid as a manikin, and there was no struggle, but I took a risk there of a very serious injury, when an X-ray would have obviated that.

Now, what had occurred was this: He had a calcification of the arch, and the X-ray man and the doctor both read this as a foreign body—it resembled both—but after the esophagoscope had passed and the picture was read by the roentgenologist, it was very clear that here was a circular form of the arch which represented a foreign body.

So I think we must be very careful about insisting upon X-rays in all these cases.

Another type of case referred to was that of the intestinal worm. I had a case of that kind recently, in which a child had swallowed a parched grain of corn, a very large grain of parched corn. The case was very difficult. The corn was successfully removed, but several days after the child had returned home, it had very serious symptoms, and they were on the point of returning the child for further treatment and examination, when a good course of worm medicine brought away several intestinal worms, and the symptoms all disappeared. The grain of corn had been in the bronchus but a short time.

Another case of the mediastinal glands—we had a child that would have paroxysms of strangulation to such an extent that we thought the child would surely suffocate. In one of these attacks, a tracheotomy had to be done, the child was in such danger. The child then went home, and after several months of wearing the tracheotomy tube, the child died in one of these paroxysms, and a post-mortem showed one of these mediastinal glands, which had ruptured and caused the choking of the child.

Also symptoms of thymus glands may be very obscure. It has been demonstrated by Dr. Friedlander of Cincinnati, that the X-ray is also very beneficial in treating these thymus glands, as several properly applied X-ray treatments will cause atrophy of the thymus glands. That has been proven very carefully.

I think the most difficult of all foreign body cases probably are the peanut cases. They will produce bronchitis and are the most difficult in extraction. Another point, you are not always safe after you have your peanut out, as the symptoms that occur twenty-four hours later, of oedema of the larynx, from passage of the bronchoscope, may become very serious, requir-

ing a tracheotomy. Even in those cases in which there is no great oedema of the larynx, the child in its weakened condition seems to be drowning in its own secretions, it is not able to cough up the accumulations that occur, and unless you are prepared to do a rapid tracheotomy and aspirate these cases, the case may go bad on you very suddenly.

Dr. Iglauer and I recently had a case of this kind.

With reference to foreign bodies remaining in the larynx for some time without producing any symptoms, I extracted the stem of a tracheotomy tube that a man was wearing for bilateral paralysis. The stem became broken off from its holder and dropped into the lung. It was not my case—he was simply sent in by another physician. When he came in, he had no symptoms whatever, and I doubted his statement and told him to examine his clothes; that it would hardly be possible that a foreign body of that kind could be in the lungs and produce no symptoms whatever. He insisted, however, that the tube was gone, and he knew it wasn't around in his clothes any place; so we passed the bronchoscope and were unable to locate it. He still insisted that it must be down there, so an hour or two later I passed the bronchoscope again, going down deeper, and I found that that foreign body had gone down till it found a bronchus just its right size, and there it became impacted. The mucous membrane quickly became swollen over the edge, so that we were not able to see it, and it was only located by palpating, when we got to where we suspected the foreign body was located.

Another case is that of a tooth that was aspirated during an extraction under anaesthesia. As the tooth was extracted, the patient gasped and the tooth disappeared. The dentist was almost sure that the tooth had been swallowed. They waited five days and watched the stools, but no evidence of the tooth appearing, I was asked to see the case. We ordered an X-ray and found the tooth located just back of the eighth rib, in the right lower bronchus. Dr. Iglauer saw this case with me. This tooth had produced no symptoms whatever; the patient was not in any distress, had no cough of any kind, and the family was very anxious to believe that there was nothing there. It was so far down that the longest bronchoscope I possessed lacked several inches of reaching to the point where the tooth was. I could see it through the bronchoscope, but was unable to grasp it. The next day Dr. Iglauer came down, and as he had a little longer bronchoscope, we succeeded in extracting it—Dr. Iglauer bringing it out.

Another case is that of a nail that was in the bronchus of a baby for almost ten days, with absolutely no symptoms. The child had gotten hold of the carpet sweeper and taken one of the wheels off and proceeded to swallow the linchpin, with no result whatever, no unfavorable symptoms. The X-ray, of course, quickly revealed the cause of the trouble.

Another case was that of a doctor's child. The child had aspirated an olive seed with great force, the seed lodged in one of the bronchi and it had gone in with such force that it was almost as if it had been driven in with a hammer. The doctor was loath to believe that there was anything there, as the usual procedure had been gone through with, of pounding the child on the back and standing it on its head, and all symptoms disappeared. But the following day, as they had not been able to recover the seed, the father brought the child in, and auscultation showed that

a portion of the lung was not getting air. The bronchoscope was passed and the seed was quickly located. But when it came to extraction, it was an exceedingly difficult problem, as no forceps would grasp it—it was almost like grasping a piece of ice; it would slip right off. But here again Dr. Iglauer was successful in grasping the body, after we had been working on it for some time.

Recently a child was brought in with the history of having choked on sixty cents. The pressure there in the esophagus looked for a moment, of course, as if it might be bronchial. The child was some distance from Cincinnati. The child was given an anaesthetic, and three surgeons worked on it for three hours in an attempt to extract the fifty cent piece, under general anaesthesia, but failing then, the child was sent to the city, and, placing it on a table without any anaesthetic, local or general, the fifty cent piece was quickly located and extracted. I told her she might keep the dime, as it was not a counterfeit, I thought it could pass all right, which it did.

One more point here as to the change of color in an object. Here is a peanut kernel that Dr. Iglauer and I saw several weeks ago. A child of Middletown, Ohio, an eighteen months old baby was choking on half of a peanut. Dr. Iglauer succeeded here in quickly extracting the peanut, and I placed it in a bottle, but when I went to look at it a day or two later, it had changed color completely—it is now white. It would deceive us completely if we were looking for an object the color of a peanut.

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*Hormotone and Hormotone Without Post-Pituitary.*—The Council on Pharmacy and Chemistry reports that Hormotone of the G. W. Carnrick Company is advertised as "A pluriglandular tonic for asthenic conditions." The same firm also advertises Hormotone Without Post-Pituitary for use "in neurasthenic conditions associated with high blood pressure." These preparations are sold in the form of tablets for oral administration. Each tablet of Hormotone is said to contain 1-10 grain desiccated thyroid and 1-20 grain of entire pituitary together with the hormones of the ovary and testes—the amounts and the form in which the latter are supposed to be present are not given. From this it is seen that the only definite information given the medical profession regarding the composition of Hormotone is that it is a weak thyroid and a still weaker pituitary preparation. Hormotone without Post-Pituitary is said to contain in each tablet 1/10 grain desiccated thyroid, and to "present" "hormone bearing extracts of thyroid, anterior pituitary, ovary, and testes." The Council declared these preparations inadmissible to New and Non-official Remedies, because: (1) Their composition is semisecret (2) The therapeutic claims are unwarranted (3) They are sold under names not descriptive of their composition, but suggestive of their indiscriminate use as "tonics" (4) In the light of current knowledge, the routine administration of pluriglandular mixtures is irrational (Jour. A. M. A., Aug. 16, 1919, p. 549).



# Sarcoma of the Cerebellum with Report of a Case\*

Paul J. Stueber, M. D., Lima

**Editor's Note.**—It is given to few to follow the development of a sarcoma of the cerebellum as reported by Dr. Stueber in his interesting case report. The details of the reactions of the tumor in its peculiar location as observed and recorded, enable one to check-up rather definitely on the fundamental physiology involved. The cerebellum may almost be considered as the gyroscope of the body being as it were the organ of equilibration. Lesions of one-half of the cerebellum result in disturbances of equilibrium and the production of forced movements. Lesions of the central portion of the cerebellum cause a deviation in more than one direction, with exaggerated movements. The various disturbances from cerebellar tumors are most marked immediately after the inception of the lesion. They gradually diminish in intensity and in some cases entirely disappear in time, compensation being taken care of by the uninjured tissue. When the tumor of the cerebellum is of very slow growth symptoms may be almost overshadowed by compensation. In differentiating conditions it should be remembered that while the cerebrum originates movements it is the cerebellum that carries them out.

**B**Y way of introduction may I recall to your attention a few physiological facts ascribed to the cerebellum?

## SOME PHYSIOLOGICAL FACTS

This organ sends out a continuous stream of impulses which result in a condition of tonicity of the body musculature, and since it is an important organ in the process of equilibration its

deviations of the extremities or the so-called *pointing by the reactions*.

To the vermis is ascribed that tonic influence exerted over the muscles which hold the body erect while standing and during progression. With a lesion involving the central portion of the cerebellum causing destruction of the fiber tracts we have a deviation in more than one direction.

The cerebellum appears to exercise an inhibi-

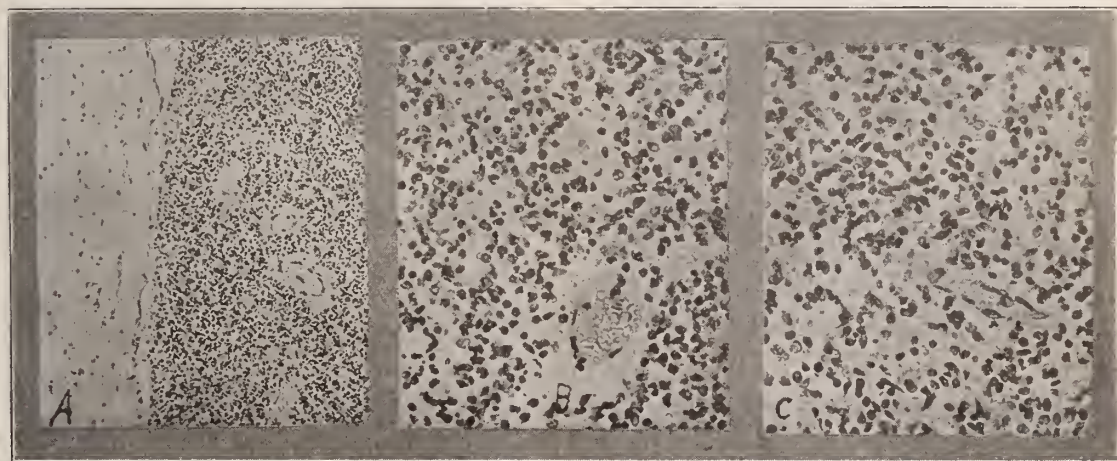


Figure 1. (A) Small Cell Sarcoma of the Cerebellum; Border of Cerebellar Tissue and Neoplasm (Low Power); (B) Near Border of Tumor (High Power); (C) Central Area of Neoplasm (High Power).

destruction by disease entails a serious disturbance of body balance.

The cerebellum is not concerned with the contraction of any one muscle but rather with groups of muscles, which in turn, are concerned in certain definite movements.

With a lesion in one-half of the cerebellum the impulses on that side are diminished and those from the opposite side overbalanced. This results in a disturbance of equilibrium, and the production of so-called *forced movements*. When these disturbances occur in the centers which control the trunk muscles they result in falling; and in the muscles of the extremities they result in

tory influence on movements and with an existing lesion we find a suppression of this inhibition resulting in unmeasured or immoderate movements—the individual componenta are ill-judged—being generally in excess of the requirement and inaccurately associated in time.

The various disturbances which occur as a result of the lesions of the cerebellum are most marked immediately after the lesion. They gradually diminish in intensity and in some cases entirely disappear in time. Compensation taking place by the uninjured tissue. When the lesion in the cerebellum is produced very slowly, there may be no symptoms whatever, compensation keeping pace with the destruction. The cerebrum originates the movement, the cerebellum carries it out.

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the 73rd Annual Meeting, at Columbus, May 7, 1919.

## CASE REPORT

February 5, 1918.

Patient: Julius A., age 8, Mendon, Ohio, referred by Dr. P. W. Fishbaugh. Weight 54½ lbs. Parents living and well. Patient one of four children, the other three living and well. On maternal side a great aunt recently died of cancer of the stomach.

*History of trauma:* While an infant the baby carriage upset and the force of the fall caused the patient to be unconscious for a time. Mother states that he did not breathe for a time due to the force of the trauma. This is a very significant incident when the pathological findings are considered.

*History of Symptoms:* In June, 1917, commenced to vomit after arising in the morning. That autumn complained of diplopia while at-

diverges. Ocular excursions are good with perhaps slight paralysis of left external rectus. Horizontal nystagmus, large slow excursions looking to the left, and horizontal nystagmus with short rapid excursions looking to the right. The type of nystagmus may be considered cerebellar in origin, associated with vertigo and vomiting, demonstrating the destruction of the fiber tracts between the vestibular nuclei and the cerebellar nuclei.

February 6, 1918.

Nose and throat examination negative.

Nystagmus is of shorter amplitude and more rapid on looking to the left. O. S. fundus reveals fullness of the optic nerve, intravaginal space bulging to a height of 2 diopters over retina.

Papilla macular bundle intact. Physiological cup, obliterated. Some hemorrhages close to optic nerve and infiltration of retina around disk except macular bundle. Macula reflex absent. Arteries and veins enlarged to considerable extent.

O. D. fundus—optic nerve shows a slight fullness over intra-vaginal space, but not as marked as left eye. Physiological cup 4 diopters deep, very small. Macula reflex present. Veins and arteries enlarged. Increased intra-cranial pressure expressed more markedly in the left fundus.

Ocular Tension—Left eye = 21 m.m. Right eye = 21 m.m.

Hearing apparently negative; other ear excluded with Barany Noise apparatus; Weber to the right.

Left ear,—bone conduction longer than that in right ear. In intra-cerebellar disease, it is very rare to have loss of hearing.

Complaints of pain over forehead, and eyes ache at times, especially on right side. Occasionally has a severe attack of pain in the form of such headache that morphine is necessary. Cerebellar crisis. Wassermann reported negative. Family history in regard to syphilis and tuberculosis negative. No evidence of lues in the patient.

Urine: Sp. Gr. 1028 and filled with urates.

Unable to arise when lying on the back, with arms folded and heels together. Pointing tests with finger misses equally well with both hands in attempting to touch his nose or the observer's finger. Spontaneous deviation of the extremities. Unable to stand on one foot and maintain his equilibrium.

February 12, 1918.

Pulse at 5 A. M. 60. At all other times has been running 70 to 80. It is advisable not to do a lumbar puncture. No disturbances of taste or olfactory sensation, nor cutaneous sensibility.

Treatment.—Iodid of potash grs. X, three times a day. Inunctions of mercury and intramuscular injections of succinimide of mercury, as well as five minute X-ray exposures three times a week.



Figure 2. (A) Cerebrum: Enlargement of Ventricular System; (B) Cerebellum: Lateral Lobe; (C) Vermis, Pons, Medulla, and Spinal Cord; (D) Lateral Lobe.

tending school, continues to see double and objects are about one inch apart. Discontinued attending school four weeks ago. Every morning after arising has a vomiting attack, if not then after breakfast, not projectile in type. Walks along a straight line with difficulty. Tendency to sway and stagger towards the left.

There is vertigo and the Romberg sign is positive and patient falls to the left after a few increasing swaying movements. The Babinski sign is negative. Ankle clonus is also negative. Patellar reflexes are absent.

Vision Left = 20/25; Right = 20/20; pupils are semi-dilated and responsive although the left one is somewhat tardy. Both pupils respond equally well to accommodation, but when the object is near the nose (two inches) the left one



February 20, 1918.

Very seldom vomits of a morning. Physical condition and appetite improved. Can walk along a straight line better than formerly. Romberg sign less pronounced.

February 27, 1918.

Pupils much more responsive than formerly. Nystagmus is more rapid when looking to the left with movements of shorter amplitude. Slower and larger excursions when looking to the right. Diplopia present only when looking at objects at

tra-vaginal space at six o'clock. Increased intra cranial pressure diminishing. At no time was there any photophobia.

Caloric Test:—Irrigating the left ear with cold water develops a horizontal nystagmus to right. Spontaneous nystagmus to the left now obliterated. The nystagmus to the right is not enduring but disappears soon. In cerebellar disease, the caloric nystagmus which is directed toward the affected hemisphere will continue for five to ten minutes or even longer and is more intense than normal. This is called by Neuman, "enduring nystagmus," and is due to a loss of the inhibitory control which the cerebellum exercises over the vestibular centers.

Accurate pointing tests:—Romberg sign positive, patient falls backward and to the left.

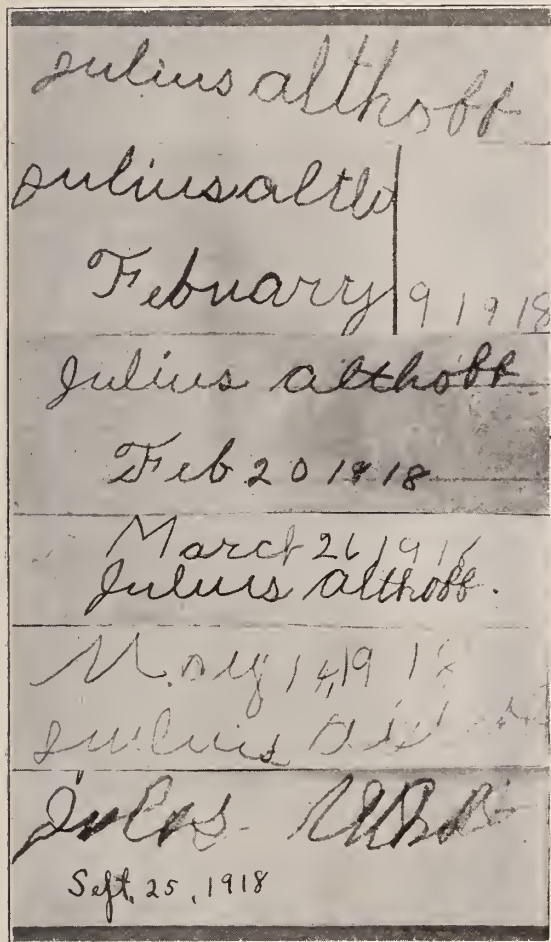


Figure 3. Showing the Changes in Handwriting and the Difficulty in Writing.

a distance of twenty feet. Romberg sign has disappeared.

Vision Left = 20/20. Right = 20/15.

March 5, 1918.

Nystagmus is not as pronounced as formerly. Left eye fundus:—Oedema of the disk has diminished and what indistinctness of the disk remains appears to be organized. Area of the papilla macular bundle is distinct. The intra-vaginal space which was bulging before is in the same diopter of vision as the retina. Physiological cup two diopters deep.

Right eye fundus:—Slight fullness of the in-



Figure 4. Showing Disturbances in Pointing with the Eyes Closed.

When, as a result of a stimulation of the semi-circular canals in an individual with a normal cerebellum, a labyrinthine nystagmus is aroused, there will occur a deviation of all four extremities in the plane of the nystagmus and in the direction of its slow component. But when there is a cerebellar lesion, the extremity affected by the lesion will point correctly in the presence of a vestibular nystagmus. In other words there is a loss of the pointing reaction.

March 6, 1918.

Irrigating the right ear with cold water develops a very marked horizontal nystagmus to the left. In attempting the pointing tests the right arm and finger are swaying back and forth with marked inco-ordination which increases as the finger is attempting to touch the observers. With the right index finger patient past points to the left. With the left index finger patient past points to the left. When there is a lesion in one-half of the cerebellum the impulses on that side are diminished and those from the opposite

side overbalance. The result is a disturbance of equilibrium and the production of so-called forced movements. When these disturbances occur in the trunk muscles of the extremities they result in deviations of the extremities or the so-called "pointing by."

When the deviation and the loss of reaction movement is in more than one direction there is probably a lesion in the central portion of the cerebellum involving the fiber-tracts.

March 19, 1918.

Nystagmus is very much diminished. Left eye fundus:—The intro-vaginal oedema is practically all gone, the area lying in the same focus as the retina. The patient past points with the right hand in attempting to touch the nose with the finger.

Patellar reflexes prompt upon reinforcement, which formerly upon reinforcement were absent.

During the month of April the patient's condition was most promising, it certainly was beyond conception how he had improved. Played with other children on the farm and appeared to have more endurance and strength than they did.

June 1, 1918.

Patient recently had the grip, and seems not to have been able to regain his strength which he had prior to this time. The father states "The patient has not the energy and enthusiasm of several weeks ago. Sits around by himself." The patient recently has had considerable difficulty with constipation. There is also marked disturbance in writing.

June 17, 1918.

Patient complains of more pain in his head. Has a desire and finds it necessary to hold on to objects in his excursion around the house, that is, he must grasp a chair or a table in his movements in order to maintain his equilibrium. The cerebellar type of gait has certainly become more marked recently. It may now be described as drunken, staggering reeling, with a tendency to deviate from the desired direction towards the side of the lesion, slapping his feet on the floor. The apparent stumbling is more or less characteristic; the patient when walking suddenly totters as though to save himself from falling, as if he were drawn by an unseen influence towards the side of the disease but as a rule he quickly recovers his balance and direction. Later the gait becomes more truly drunken or ataxic and the patient stumbles and reels from side to side.

In this lesion the subjective uncertainty and unsteadiness seem to be in excess of the objective disturbance.

July 18, 1918.

Patient administered .2 gramme salvarsan intravenous—considerable reaction—oedema of lids and diarrhoea; now he vomits daily. While during the period of improvement he vomited on an average of once in two weeks. The patient is more forgetful than formerly, and repeats test

words and counting fairly well. There is an explosive character to his conversation.

Pupils responsive and equal. Vision, Left = 20/15. Right = 20/15.

There is slight weakness of the right arm and leg. Also slight sensory disturbance in the right arm and leg, positive Babinski reflex on the right, which may be considered as involvement of the pyramidal tract as it passes down through the pons. Ataxia of the right arm of the cerebellar type. Atonia, dysmetria is most marked in the right arm.

August 9, 1918.

Consultation with Dr. Carl Camp, University of Michigan. His opinion: "I am inclined to agree with your diagnosis of brain tumor probably in the region of the cerebellum, more probably in the cerebellar peduncles. It might be one of those cases of solitary tubercle of the pons which extend up through the roof of the fourth ventricle into the vermis of the cerebellum and of course are usually a little to one side of the median raphe so that they give rise to some unilateral symptoms and signs."

September 7, 1918.

Patient is unable to walk alone. There is typical cerebellar gait when aided to walk. Vomiting diminished and general spirit of the patient is much better since the X-ray exposures of the past three weeks. Patient sits in a chair as if he had no spinal column. Is unable to hold himself erect and falls forward. Speech is improved and the explosive character is diminished, and the scanning quality is improved.

September 25, 1918.

Patient's attitude and manner somewhat brighter, over former visit. Sits in a heap when placed in a chair. Unable to walk and the ataxia of both arms is more marked.

The left eye: The physiological cup, which was two diopters deep, is obliterated. The right eye: Same as formerly.

October 7, 1918.

No improvement.

January 7, 1919.

The father was in today stating that the patient is bedfast. Complete loss of function of both legs and the function of both arms is also more impaired, so that he is unable to feed himself. The complete loss of the functions of both arms has developed during the past four weeks, also marked jerking movements of the limbs, nystagmus is more marked.

Died—January 23, 1919.

#### AUTOPSY

The exterior of the cerebrum and cerebellum appear negative. On the ventral surface of the pons was found escaping clear fluid, amounting to twenty-one ounces. The 3rd, 4th and lateral ventricles were greatly enlarged—the foramen of Monroi and aqueduct of Sylvius were enlarged so as to have disappeared. The walls of the ventricular system were greatly thinned at the



sacrifice of the surrounding tissue. Tuber cinereum was enlarged and the hypophysis degenerated, leaving only the remaining capsule. Corpus callosum thinned to a few millimeters. The pons was degenerated at the superior pole and so friable that it and the cerebellum broke off en masse when the brain was removed. The cerebellar peduncles were degenerated, leaving only a trace of capsular tissue.

The cerebellum presented on section a sharply circumscribed, necrotic, caseated mass, replacing practically all the entire vermis, and extending well out into the cerebellar hemispheres, leaving only a small capsule of cerebellar structure varying in width from a few millimeters to two centimeters.

Pathological diagnosis *small round cell sarcoma*.

This may be considered as arising from an especial congenital anlage—so that we may in a certain sense regard it as a local malformation of tissue. The small round cell sarcoma is a very soft, quickly growing tumor which develops occasionally in the connective tissue of the motor apparatus and supporting fragment. As Ziegler says "Trauma not infrequently gives the immediate occasion for the beginning of the development of the tumor from the pre-existing anlage."

Foot Note: Appreciation is expressed for the willing co-operation of the following: Dr. Carl Camp, University of Michigan; Dr. A. S. Warthin, Pathologist, University of Michigan; Dr. Herbert A. Thomas, Roentgenologist, Lima, O.; and Dr. E. H. Brumm, Coldwater, O. For reference I have used Friesner and Braun's "Cerebellar Abscess."

#### DISCUSSION

DR. F. G. STUEBER, (Lima): This very interesting case of course is worthy of comment. There are several noteworthy points in the case just presented. One is the almost 20/20 vision, visual acuity, with such marked fundus changes. While there was no oedema, the choked disk was not as pronounced as in many cases, yet there was some swelling, and marked changes throughout the fundus, the retina, blood bespattered, and yet with all of that the vision was 20/20. Another peculiarity is the apparent, or real improvement in the case, after it had been under treatment for a time; indeed so much improvement that one might well have questioned the diagnosis.

To confine myself to my own personal experience in the matter of brain tumors, I would say that it does not amount to much. In the course of some twenty years, it has been my lot to have observed perhaps some six or eight cases of brain tumor. None of them are living today.

The subject is one that is far-reaching and of more than ordinary interest. It interests the ophthalmologist, the oto-laryngologist, the internist, the practitioner, the surgeon, and last but not least the neurologist. Medical science has progressed in this, as in all other directions, but it has occurred to me that the progress and advancement perhaps are in a large degree due to the general advance, especially in surgery, which has made the prognosis more favorably in cerebral as well as in abdominal cavities.

I dare say, I think the progress in this particular may be summed up in a single word,

which represents the progress not only in the last decade or two, but for the last century—*asepsis*. Notwithstanding the optimism and the favorable reports of many cases of brain tumor, I cannot, from my own personal experience, look at it in that light. With few exceptions, we find it to be of greatest importance, and the exceptions to which we refer are those of luetic or specific origin. Not infrequently we are elated over the ophthalmoscopic findings, the disclosure of a choked disk and involvement of the retina, enabling us to localize, and I might say classify tumors of the brain. However, here, much as in nephritic disease, oftentimes the ophthalmoscope is the first intimation of any functional or organic disorder. After all, it does not mean very much to the patient. It has been said, it is but the handwriting on the wall, and we can do little but comfort the patient.

In brief I will refer to a few cases. One is that of a gentleman past sixty years of age. I well recall the first interview—it was on the train. He was going to Lima, coming from a neighboring town, and he then stated that he was coming to see me regarding his vision. The following week he consulted me. I don't just remember the vision, but it was low, and he had bilateral choked disks. Naturally enough, we suspected his trouble, and I am sorry to say that in process of time the case grew worse. He not only developed further impairment of vision, but had more or less headaches, later he developed impairment of hearing; in fact, nearly all of his special senses were involved. Sometime later he developed nausea and vomiting, the cerebellar gait, and toward the last intellectual derangement. In this particular case we were permitted to hold a postmortem, which disclosed a growth, probably the size of a small egg, situated on the pons and surrounded by numerous small cysts, which were filled with clear fluid. A specimen was submitted to a Ft. Wayne pathologist, who pronounced it to be gliosarcoma.

Just one more case. The case of a young man, probably twenty-one years of age. He consulted us with reference to vision and headaches. He had been complaining of headaches for some considerable time and was obliged to give up his school work (teaching) on that account.

Naturally enough, the prognosis we gave was anything but favorable. Having looked at the fundus oculi, the patient left, never to return. He went to Cincinnati and consulted several gentlemen there. I think Dr. Murphy was one of them. I should be glad to have him discuss the case.

From there, he went to St. Louis, and at the latter place was operated. The later report I received was that he died within a year. What the operation was, I do not know.

I presume to make the prognosis of these cases more favorable, we must make an earlier diagnosis. We are told that headaches, especially when accompanied or following injuries and falls, are significant.

DR. OSCAR BERGHAUSEN, (Cincinnati): The simple procedure of spinal puncture has been followed in a few instances by sudden death. Autopsy shows these cases to be due to a cerebellar tumor. It is the only case in which you need to fear a spinal puncture. The doctor said it was indicated. I doubt whether it was. If you do a spinal puncture in such a case, when you put your needle in and pull it out, you want to be careful; just let your fluid drop out one or two or three drops a minute, and just take enough fluid in order to enable you to determine what is there. But be careful! This is the only type of case in which you have to exercise such care.

# The Intermediary Operation After Childbirth and Its Technique]

J. L. Bubis, M. D., Cleveland

Assistant in Obstetrics, Mount Sinai Hospital.

**Editor's Note.**—While there is some question as to the best time for performing the intermediary operation, Dr. Bubis, from the results of recent cases has found it equally satisfactory to do the operation immediately after the delivery as one or more days later. Dr. Bubis quotes several case reports in support of his opinion. It is a big economic factor to do the intermediary operation on all parturient women, especially those of the working classes immediately after confinement as it does not lengthen their stay in the hospital nor necessitate their return for the operation later on, while at the same time it returns them to their homes and occupations in fit condition to meet all the demands made upon them. The operation should be as complete as possible, whether it involves the repair of a cystocele, rectocele, torn cervix or a combination of these conditions with a hemorrhoid operation besides. Irrespective of the extent of the operation it is satisfactory and encouraging in results if properly performed. Dr. Bubis mentions in detail many of the technical points that help to make the intermediary operation a routine success.

**DEFINITION:** Intermediary operation means the repair of old lacerations of the genitalia during the lying-in period, at any time after the birth of the child and the expulsion of the placenta.

In a previous paper, I stated that the operation should be done one or more days after the delivery.\* Since then, however, it has been done in two cases immediately after the delivery and the results have been equally as satisfactory.

## CASE REPORT

The following case demonstrates the safety of the procedure providing strict asepsis is observed.

Mrs. T., para II. Thirteen months previous to her admission to Mt. Sinai Hospital, she had been operated for a subacute appendicitis. At the same time, the right tube and ovary were removed for a chronic inflammatory condition, and the uterus was brought forward into good position by plication of the round ligaments upon the anterior surface of the uterus. Convalescence was uneventful.

Her pregnancy was normal until the last six weeks, when she felt quite miserable owing to severe, false labor pains. Upon entering the hospital, rectal examination revealed an undilated cervix. The foetal head was unengaged and the uterine contractions were occurring every two to three minutes. Under gas-oxygen anaesthesia, the genitalia and vagina were carefully prepared, and an attempt was made to insert a Barnes bag into the cervix. It was impossible to do this satisfactorily as the amniotic membranes were firmly adherent to the lower uterine segment and the internal os. The cervix and the vagina were therefore firmly packed with iodoform gauze and the patient allowed to come out of the anaesthetic. Several hours later, the cervix was softened and dilated to about two finger-breadths. Bulging of the anterior and posterior vaginal walls was very marked. The patient

was rapidly tiring and there was a very marked acceleration of the foetal heart sounds.

The patient was again anaesthetized and carefully prepared. The bladder was catheterized and one-half ounce of sterile glycerine was injected into it. During manual dilatation of the cervix, the membranes accidentally ruptured. The foetal head being still unengaged, a version and extraction of a six and one-half pound fetus was easily performed. Not wishing to subject the patient to another anaesthetic for the repair of the relaxed outlet, it seemed advisable to repair the cystocele and rectocele immediately. The patient made an uneventful recovery and left the hospital fourteen days after admission in perfect condition.

## ADVANTAGES OF THE INTERMEDIARY OPERATION

The advantages of the intermediary operation are manifold. The most important factor is the economic one. Most of these patients were of the working class or dispensary cases. In their previous confinements, they had been cared for by midwives or by general practitioners under most unfavorable conditions, and the genital lacerations were given very little if any care. It is very important to make their stay in the hospital as short as possible and at the same time to send them home in the best physical condition. Most of these women had suffered for years from the results of old lacerations of the genitalia but could not be induced to enter the hospital for repairs on account of their large families, the expense, and the help problem. It would have been almost impossible for them to return six weeks or more after confinement for a selective operation.

By doing an intermediary operation, we have been able to put these patients in better physical condition and not prolong their stay in the hospital to any great extent. The pain is not more severe than that suffered after the routine operations for repair of the genitalia. Sepsis or extreme weakness are the only contra-indications. Operative deliveries are not contra-indications unless the tissues are badly bruised or swollen.

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association during the 73rd Annual Meeting at Columbus, May 7, 1919.

\*Bubis, J. L.—Ohio State Med. Jour., Jan., 1919.



## RESULTS

In a series of 41 cases whose ages ranged from 21 to 46 years, there was no mortality and only one case developed infection of the vulvar veins. This case was reported in a previous paper.\*

The following were done:

Repair of cystocele, rectocele.....	on 24 patients
Repair of cystocele, rectocele cervix .....	on 12 patients
Repair of cystocele, rectocele hemorrhoidectomy .....	on 2 patients
Repair of cystocele, rectocele cervix hemorrhoidectomy .....	on 1 patient
Repair of cystocele, cervix.....	on 1 patient
Repair rectocele .....	on 1 patient
Hemorrhoidectomy .....	on 1 patient

The results of the intermediary operation have been very satisfactory and encouraging. All the cystocele and hemorrhoid operations gave perfect results. The trachelorrhaphies, in which the lacerations varied from a mild unilateral to extensive bilateral tears extending into the fornices, also healed satisfactorily. In two cases, slight adhesions between the cervix and vaginal wall formed which were later separated under local anaesthesia. All but four of the perineorrhaphies healed perfectly. These four showed slight sloughing at the muco-cutaneous border, but the results were much better than the conditions present before the operation.

## TECHNIQUE

Strict asepsis at the time of the delivery and during the operation is paramount. Only rectal examinations are made before or during the labor unless operative interference is contemplated.

If the intermediary operation is done 24 hours or more after delivery, the following technique is observed. The night before the operation, twenty grains of sodium bromide are given if the patient is nervous or apprehensive. One-half hour before being sent to the operating room, she is given 1 c. c. of pituitrin by hypodermic injection. This firmly contracts the uterus and expels the excess of lochia or blood clots, if present. Under gas-oxygen anaesthesia, the vulva and perineum are carefully washed with lysol solution, one drachm to a pint of water, followed by alcohol. We formerly used a two per cent. iodine solution, but the severe pain, burning and irritation of the tender skin caused more distress to the patient than the operation itself. Since we have discarded the use of iodine, the patients have been more comfortable after the operation and their convalescence has been much smoother.

The vagina is then exposed by a posterior retractor, wiped dry with cotton swabs, and painted with a two per cent. iodine solution. It is very important to thoroughly swab the cervix and posterior fornix with this solution.

The next step of the preparation is important, namely to catheterize the bladder and inject one-half ounce of sterile glycerine into it. Since

using the glycerine in this manner, we seldom have to resort to the catheter for post-operative retention of urine.

A weighted vaginal retractor is then inserted and the cervix is exposed and repaired if necessary.

## CYSTOCELE

For the care of the prolapses of the anterior vaginal wall, or so-called cystocele, it is necessary to form a new base for the bladder, but also for the urethra. Unless this is done, the urinary meatus will gap, the urethra will sag, and full control of the bladder function will not be obtained. It is therefore necessary to make an incision through the anterior vaginal wall from a point just below the urinary meatus to the cervico-vaginal junction. The vagina is then separated by blunt dissection from the sub-vesical fascia on either side as far up and as far out as possible, connect both sides of this fascia and include a small part of the anterior wall of the bladder. This will prevent the formation of a *dead space*. When tied, these form a strong, firm support for the bladder and the urethra. The excess of vaginal flaps is cut off and the edges are brought together with a continuous interlocking No. 1 or 2 chromic catgut suture. This part of the operation is done in ten to fifteen minutes.

## RECTOCELE

The most satisfactory method of repairing the posterior vaginal wall or rectocele is through a U-shaped incision along the muco-cutaneous border extending from a point just below the opening of the vulvo-vaginal gland to a point on the opposite side. Four to eight Ochsner clamps are placed along the lower margin; these act as good retractors. With the gloved finger or knife handle, the upper flap is dissected free from the levator ani muscles on each side as far as the finger can reach. It is then separated from the perirectal tissue *beyond* the crown or most prominent part of the rectocele. Three or four deep sutures of No. 2 chromic catgut are then used to bring the levator ani muscles together. It is very important to place the upper suture as deep and as high as possible and at the same time to include the base of the mucous flap and thus avoid the formation of any *dead space*. The body of the perineum is then built up on the base thus formed. The excess of skin and mucous membrane is cut off and the cut edges are connected with interrupted chromic catgut No. 1 and 2. A two inch strip of iodoform gauze is packed into the vagina and is removed in 24 to 48 hours. This part of the operation takes fifteen to twenty minutes.

The rectum is then dilated and if there are any hemorrhoids present, they are removed.

## POST-OPERATIVE TECHNIQUE AND CARE

The patient is out of the anaesthetic before or

shortly after reaching her bed. If she suffers very much pain, she is given one-half grain cod-ein sulphate every three or four hours, if necessary. For nervousness, fifteen to twenty grams sodium bromide, are given. She is encouraged to drink water freely, is given liquids the next day and a soft diet the following day. The child generally misses one feeding, but thereafter is put to the breast according to the standard schedule. The patient is allowed to assume any comfortable position. A thick pillow placed under the knees gives marked relief.

Since using the preoperative injection of glyc-erine into the bladder, it is seldom necessary to resort to post-operative catheterization.

Fluid extract of ergot *mx t. i. d.* is given to keep the uterus firm and to decrease the lochia. If the patient is suffering from severe after-pains, this drug is omitted.

Oil injections (four ounces olive oil) every morning and one-half ounce of liquid paraffin by mouth are ordered if there has been any rectal operation performed.

The patient is allowed to sit up in a chair as soon as the wounds have healed. This is generally between the tenth and fourteenth days. She is urged to keep the bowels and the bladder empty and to avoid straining. She is also advised to assume the knee-chest position for ten minutes at a time, two or three times each day until complete involution occurs.

#### RESUME

1. The safety of the intermediary operation depends on the strict asepsis during the delivery and operation.
2. Old lacerations of the genitalia may be repaired immediately after childbirth in the absence of sepsis or very badly bruised maternal tissue.
3. An operative delivery is not a contra-indication to the operation.
4. From an economic standpoint, this operation has proven its value.
5. The pre-operative injection of glycerine prevents post-operative catheterization of the bladder.
6. The pre-operative injection of pituitrin is of value in decreasing the lochia.
7. Gas-oxygen anaesthesia was used in all cases. As a result, there was practically no interference with the nourishment of mother and child.
8. In the repair of the cystocele, it is necessary to form a new support for the urethra as well as for the bladder.
9. The patient may assume any comfortable position after the operation.
10. Although the intermediary repair of the cervix and perineum has been done by others, I have found no record of the repair of the cystocele being done during the lying-in period.

1725 EAST 82ND ST.

## Some Phases of Rural Health Problems\*

J. C. Larkin, M. D., Hillsboro

Editor's Note.—In spite of the fact that Ohio now has what purports to be an ideal Health Law, it remains to be seen whether or not it will be able to overcome the natural perversity of human nature in rural communities as well as the opposition of a certain class of doctors who make it a policy to violate health rules and regulations at the dictation of their patients. If anything definite in the way of sanitation, public health and disease prevention is to be accomplished it must be through the cooperation of all concerned. It is interesting to note that some of the things Dr. Larkin criticizes are being corrected and others he suggests are being carried out.

TO anyone who has given the least thought or consideration to the matter, this is an entirely undeveloped and unexplored field to the greater majority of individuals. The health experts have for a long time been asking the attentions of the public as well as the state health department and occasionally some local physicians who might have developed enough pride to preach against the prevailing conditions. Most if not all of these wrong warning signals have gone on unheeded. The rural population has gone on undisturbed in about the same old manner, that it has been doing for the past fifty or one hundred years, with only slight variations. If a farmer's family or some of his tenants developed a number of typhoid fever cases, things

began to assume a rather serious turn. They then began to sit up and take notice. A few had sufficiently advanced ideas to know and understand the reasons and heed our warning about the well water. But the most were satisfied in their own minds that their old wells and springs had the best, clearest, coldest and purest water in the world, and they went right back to using it again. They soon forgot the calamity when by some mysterious providence the Death Angel visited their homes in the guise of typhoid, diphtheria, scarlet fever, or some other malignant disease. They forgot and went right on raising more corn to grow more hogs, to buy more land, to grow more corn, and grow more hogs *ad infinitum*. They employed all known methods to prevent hog cholera, they used all the vaccines and spent plenty of money in much that accomplished in many instances very little that was

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association during its 73rd Annual Meeting at Columbus, May 6, 1919.



worth while, but they could see the effects in dollars and cents, and that counted. I will never forget the difficulties that I encountered in trying to inoculate the well members of a very large family, one-half of whom were either sick or dead with typhoid. One member had to be forced to take the injections. These injections were among the very first employed in private practice in the state. It worked and I had no further spread of the disease, and my reputation was sustained in the community.

#### PERVERSY OF HUMAN NATURE

Now it seems useless to go on in this matter, repeating what everyone here knows perfectly well to be a fact. Still it is an absolute fact that more than one-half or two-thirds of physicians who practice in rural communities, while they know it, do not seem to be able to make it understood by those whom they serve. And it is safe to assert that not more than two to five per cent. of the general public understand the simplest sanitary and hygienic truths sufficiently to make them effective and worth while. For several years this society has carried on an educational campaign against disease both in public and private and yet most of it has been unheeded.

It would seem that we should be accorded as much or more attention than the so-called "cults." If we were as successful in propaganda as the Chiropractors, Christian Scientists, and other cults seem to be, all our ideals might be realized, but such is not the case.

Such is the perversity of human nature, and human nature has not changed in many essentials since Eve tempted Adam with the apple in the Garden of Eden, down to the time William of Hohenzollern tried to put the skids under civilization and slide it into the Atlantic Ocean.

The world war and the preparation and activities which were made to meet its demands have helped to bring out the necessity for sanitary and public health control. The epidemic which spread over our fair land for seven or eight months and which took a toll of 100,000 individuals per month in the prime of young man and womanhood has still more emphasized the necessity of public health control.

The laws, rules and regulations that have existed in the past have been a farce, only a very few of the larger cities have had health regulations that carried any weight or were in the least effective.

#### DIFFICULTIES OF ENFORCING HEALTH REGULATIONS

In practically all rural towns and communities the supervision of the public health was usually delegated to a horse doctor; an undertaker; sometimes the recent graduate who needed the measly stipend to pay his rent; exceedingly rarely to an established and reputable practitioner who might undertake to stem the storm of disapproval and kicks that were registered

against the restrictions. Most frequently the doctor himself was the most flagrant violator of the health rules and regulations. He became a law unto himself. If the family and friends did not want to have diphtheria, scarlet fever, or small-pox why they did not have it, that was all and it was not reported. I know of an instance in which an epidemic of small-pox of over two-hundred cases developed because a doctor did not know enough to recognize the disease until it had spread or else did not care to quarantine. I positively know of numerous instances in my own community during the "Flu" epidemic where they sent for a doctor whom they knew would not have them isolated and the house placarded. One social climber with a marriageable daughter handed it to me rather raw when I placed a card in their window. When another member took sick they secured the services of a doctor who would not isolate them. So much reward for doing your duty. Time and again I have been ordered out of homes because I established a quarantine. The annual stipend that the health officer drew in most county seats or villages would not have been sufficient pay for a well conducted labor case. People usually get about what they pay for.

#### VALUE OF HUMAN LIFE

It is high time that this slipshod, careless, indifferent, ineffective and inefficient method was regulated to oblivion. It was a makeshift. If it ever served any useful purpose that time is long past.

The experience of everyone of the warring nations proved the scientific efficiency of preventive medicine and sanitation. Had it not been so the war would have ended in favor of the countries that could best prevent the spread of disease among its armies and civil population. The greatest war in the history of the world in which ten and possibly twenty-five times more men were engaged than in any other is the only one in which disease destroyed fewer lives than did bullets. Possibly the time may come when it is as heroic to save and preserve life as it is to destroy it. Possibly the time may come when a fickle public will have enough manhood and decency to erect monuments to those who have contributed to the welfare of mankind and the prolongation and saving of life. Preventive medicine is now about to take its justly merited place along with other branches of science.

A man's life is worth about so much in dollars, about \$3,000 I am told in this country, and a baby's so much according to age. While hogs and pigs have been quite valuable in recent months, they seem to be almost as highly esteemed as women and babies. It would seem that that time has passed. The newly enacted bill holds out great and glowing possibilities for good to the public and the highest ideals of organized medicines.

You, no doubt, are as familiar with its plans as myself and it need not be discussed here. The

carrying into effect of such a law will require much wisdom and foresight if it is to achieve the highest ideals of its sponsors. I earnestly hope and pray that it may not fall to the lot of petty partisan politics, that there will be found a sufficient number of highly trained and efficient men to fill the various positions that will be opened by it and that they will have had sufficient experience and wisdom to make it a real success.

Most of our leading medical universities are now offering a degree in Public Health. This we take to be a favorable sign of the times and they can supply our needs.

Its success will depend not only on its administration but on the general profession at large. The profession must give its hearty cooperation and support to the measure in order that it may succeed.

## Venereal Diseases as a Problem of Preventive Medicine\*

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**Editor's Note.**—There are other infections rampant in Russia than Bolshevism. In certain communities in Russia, for instance, where syphilis has full sway only 5 per cent. of the population is free from the contamination of this plague. What is worse is that from 50 to 60 per cent. of the infections are contracted innocently. Russia is not the only country that has suffered from such a scourge of lues. And it is quite plausible that the population of any country may become intensely syphilized if venereal diseases are not considered a prime problem of preventive medicine. As Dr. Shapiro points out the venereal diseases, viewed epidemiologically, present a graver problem than others, because general disease epidemics, if allowed to run unchecked, victimize a certain number of people but may terminate either through immunity acquired by the population or through loss of virulence by the germ, while venereal diseases do not seem to lose their virulence and it is doubtful if people can acquire an immunity against them. Eternal vigilance is, therefore, necessary in their control.

**I**T IS no exaggeration to say that the venereal diseases are of grave concern to the nation.

We have in our midst a constantly acting peril that does its damage and tends to multiply itself and to spread out in various directions. We can say that we have a constant epidemic of venereal diseases in this country. Even according to conservative figures a large percentage of the people are infected. We have chronic carriers who openly spread the infection and there is plentiful opportunity for transmission of the germs by personal contact.

### PREVALENCE OF SYPHILIS

In fact, viewed epidemiologically, the venereal diseases present a graver problem than the better recognized epidemics. General disease epidemics, if allowed to run unchecked, victimize a certain number of people but may terminate either through immunity acquired by the population or through loss of virulence by the germ. The causative germs of venereal diseases, however, do not seem to lose their virulence and it is doubtful that people are acquiring an immunity to these diseases. In certain communities in Russia, for instance, where syphilis has full sway, only five per cent. of the population is free from the infection. Another interesting point in connection with the Russian situation is that from fifty to sixty per cent. of the infections are contracted innocently. Is it not plausible that the population of any country is in danger of becoming syphilized if the epidemic is not dealt

with? Even the present day figures on the prevalence of venereal diseases cannot be ignored. Jeans of St. Louis, who bases his observation upon his own work and the findings of others, concludes that from ten to twenty per cent. of the adult males in this country have syphilis, that four per cent. of the unmarried women, ten per cent. of the married women and five per cent. of the infants are syphilitic, and that at least one out of ten marriages involve a syphilitic individual. Jeans found 9 2/3 per cent. positive Wassermanns among 5,359 pregnant women examined.

Wassermann tests among adults admitted to hospitals and dispensaries in five cities show positive reactions in the following percentages: Baltimore, 10.8 per cent.; Chicago, 13.4 per cent.; Boston, 15 per cent.; Ann Arbor, 5.8 per cent.; San Francisco, 7.4 per cent. Out of the fifteen thousand city hospital inmates of New York 22 to 25 per cent. had positive Wassermanns. Wedder reports positive Wassermanns among 13 per cent. of 11,953 accepted recruits in the U. S. A. (1916). Among the recruits of more advanced age he found a larger percentage of positive Wassermann tests. Craig estimates that at least five per cent. of all applicants for enlistment for the army prior to this were infected with syphilis. Fifteen per cent. of 856 candidates for policemen in Washington, D. C., and about five per cent. of 3,203 candidates for commissions in the U. S. A. gave positive Wassermanns.

Doctor Ecker of Cleveland found some amazing percentages. He found as high as thirty per cent. positive Wassermanns taken on 218 travel-

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association during its 73rd Annual Meeting, at Columbus, May 6, 1919.



ing salesmen and 22 per cent. among 1,000 outdoor laborers. He examined more suspicious cases than he would have had he examined the population at large yet he did not pick his cases from only clinically positive, but his examinations were made from a number of individuals upon whom a Wassermann was made simply for the purpose of diagnostic elimination. Out of fifty women examined at the Cleveland workhouse 41 gave positive Wassermans. These women were not necessarily prostitutes but a number of them had been arrested on petty thievery, non-support of children, and other charges.

Mortality statistics for Ohio for 1916 give syphilis as the cause of 454 deaths. But syphilis is also responsible for about twenty per cent. of cases that die with diseases of the nervous system. Also according to St. Louis vital statistics,  $3\frac{1}{2}$  per cent. of infant deaths are due to syphilis and there were 3,879 deaths in early infancy. There were 4,575 stillbirths and we should give the *spirochaeta pallida* credit for at least 40 per cent. of these deaths. Conservatively speaking, syphilis killed 4,000 lives in Ohio in 1916, besides we also know that a number of deaths cited as being due to cardio-vascular diseases, liver and kidney troubles were in reality due to syphilis. Diseases of the genito-urinary system are given as cause of deaths in 5,865 cases. One has no way of estimating the number of these deaths due to gonorrhea but nobody doubts that gonorrhea is a definite, though often remote cause of death in genito-urinary diseases. As to the morbidity of gonorrhea, perhaps the statement of the N. Y. Health Department that eight out of every ten men in New York have or have had gonorrhea gives us a clue to its prevalence at large.

In my own experience caring for 500 men (mostly married) in an industrial plant while I found few acute cases, I came across the aftermath of gonorrhea in a large number of men and to my query whether they had ever had gonorrhea I seldom found a man but who would say "Oh, I had that several years ago." The only other answer I heard was "No, I was lucky." If the complement fixation test for gonorrhea were as much in use as the Wassermann test, we would find some interesting figures. It may be of interest to compare the morbidity statistics for two states and five extra-cantonment zones. These statistics are the telegraphic reports received by the Public Health Service for week ending April 5, 1919. Georgia reports 64 cases of pneumonia, 68 cases of smallpox, pulmonary tuberculosis 26, measles 82, gonorrhea 102, syphilis 46. In Illinois scarlet fever 140, smallpox 108, gonorrhea 189, syphilis 175. The reports for five extra-cantonment zones for the same week show 35 cases of measles, 12 cases of pneumonia, 8 cases of tuberculosis, 22 cases of chancre, 135 cases of gonorrhea and 64 cases of syphilis. Venereal disease organisms respect neither season nor locality.

#### PREVENTION OF SYPHILIS

The science of preventive medicine has to its credit the successful elimination of many epidemic producing diseases. It has only been a matter of knowing the characteristics and life history of the causative agent, its means of invading the human organism and the means by which the disease is spread from person to person. A long list of communicable diseases has been cited by public health men as a proof of their belief in preventive work.

There are two classes of diseases that are still a problem; tuberculosis and venereal infections, in spite of their being easily overcome. For although the tubercle bacillus, the gonococcus, the *spirochaeta pallida* are well known to medical science, and their requirements for surviving, their methods of spreading, have been learned, still it is known that there are general unfavorable social conditions that serve as obstacles in the elimination of the evil.

It is believed by many that the venereal diseases are a bigger problem now than tuberculosis, against which work, medical and educational, has been directed for years. There are definite methods of dealing with this problem and these methods are more or less successfully applied in a number of states. Sanitariums were and are being put up at public expense and indigent cases are treated. A large number of cases have been arrested and chances of spread by ignorance of the disease have been diminished.

Venereal diseases were so far little dealt with and there are a large number of venereally sick uncared for. The cities are filled with apparently healthy young people who are chronic victims of venereal disease and who transmit these diseases to young girls and children. Men infected with tuberculosis in the acute stage either do not marry or when marrying do not necessarily transmit the disease to their wives. Their children do not inherit tuberculosis although they have a predisposition to it, while in the case of syphilis the men do marry and invariably transmit the disease to their wives and children. In case of gonorrhea men will also transmit the infection to their wives and become a possible cause of ophthalmia neonatorum in their children.

#### METHOD OF ACTION

If venereal diseases are to be treated epidemiologically the following things are to be done: 1. Attempt should be made to detect infected people or carriers of the disease. 2. Patients with acute and chronic infections are to be treated. 3. The carriers who have opportunity for infecting others must be isolated. 4. Publicity is to be given to venereal diseases in order to safeguard people from contracting them. Publicity also is to be directed toward educating people as to the need of early and complete treatment. 5. Last, but not least, the new generation should be reared with a healthy conception of sex matters.

1. Detection of infected people can be made through reports by physicians, druggists, social workers, hospitals and industrial plants. Up to this time venereal disease has been treated from the individual's standpoint and with all the secrecy prescribed by medical etiquette. However, at the present day the venereal diseases according to the rules and regulations of the State Department of Health are classed as communicable diseases and it naturally follows that their existence must be made known to the State Department of Health.

2. As far as proper treatment of venereal diseases is concerned, it is hampered by the ignorance of the nature of venereal diseases. The number of patients treated by druggists, quacks or with a friend's medicine far exceeds the number of cases treated by ethical physicians. Many people yet believe that gonorrhea is cured when the discharge dries up and that syphilis is cured as soon as the chancre disappears following an application of calomel powder. Invariably we hear the same complaint from physicians throughout the state of the difficulty of getting patients to return for subsequent treatment after the first two or three visits when either the gonorrheal discharge ceases or the chancre disappears. It requires careful instruction to patients to induce them to complete treatments, as in cases where the doctor insists the patients interpret that as the doctor's desire to take their money away. Then there are cases, especially among women, who do not even know that they are diseased and never receive any treatment unless detected accidentally. While men realize immediately that something is wrong because of burning on urination, pain and discharge, a woman may not suspect anything and believe herself to be suffering from leucorrhoea. It often happens that a man comes to a clinic for examination and is surprised when told he has gonorrhea. He does not believe it, because the girl he knows is absolutely O. K. Invariably when the girl is examined she is found to be infected though she never suspected it as she only knows boys who are O. K. The war has produced a number of war brides who are quite frequently victims of venereal disease. The unstable social conditions during the war, the change of occupations throwing a great number of girls into new contact with men, the lure of the uniform, all this made a number of women less conservative and of course a number of them became victims of venereal disease. The workers in a number of smaller towns in Ohio tell me that they know of many women, American or foreign, who are infected and who do not receive any or get inadequate treatment. In one town a worker told me of a number of pregnant women who are also infected and these women are of the type who are apt not to use a physician's services for confinement.

3. Isolation of carriers who have opportunity for infecting others is a tremendous task. The

prostitute is considered the greatest of the carriers and her isolation becomes a question of applying the state health laws to the quarantining of prostitutes who are defined as a prolific source of venereal disease. This work demands the support and intelligent, unemotional cooperation of local health departments, of city officials and of the public. As far as the so-called private snaps are concerned or the clandestines, they are even much harder to deal with as their existence can only be detected through careful analysis of cases reported and through tracing sources of infection. The findings given to me by doctors and social workers through the state lead me to believe that the clandestine is far more numerous than we ever thought. Statistics from England show that 708 out of 981 cases of gonorrhea and 1,281 out of 2,238 cases of syphilis were infected by amateurs.

The value of sex education is evident. Normal sex knowledge in the young people takes away curiosity and mystery as to sex functions and may in time make them react healthfully to prostitution and to the various abnormal sex practices so common even among the very young. Prostitution in time will probably be combatted by boycott and this boycott can be accomplished first through successful education of young men as to the truth about sex matters and knowledge of venereal diseases. Second, by having women demand cleaner sex life of men; in short by doing away with the double standard. At present, a prostitute may find it difficult to ply her trade in the city where through the workings of the venereal clinic she is subjected to examination and quarantine each time she is reported as a source of infection. When the problem is analyzed it becomes evident that our former methods of dealing with venereal diseases did not bring any results. The doctors treated all the cases that came to them but the druggists administered to a much greater number. The meager statistics from a few cities show that to every case reported by a doctor five or six are reported by a druggist. A large number of cases never saw a doctor's office. The carriers, women and men were free in their work of creating new victims. The hope of the moralists of keeping away from sin were unrealized. Social workers have tried to reclaim individual prostitutes, but though much money and energy have been spent, yet the ranks of the prostitutes are constantly being filled.

The problem of venereal diseases must be dealt with as a problem of preventive medicine and must be treated like every other epidemic. The state now has the necessary legislation for reporting cases, for quarantining acute cases, and for bringing about the needed treatment. In addition to these laws it is necessary that the physicians, dentists and other persons who are in position to learn of the existence of cases shall deal with them with a view of preventing them from becoming a menace to public health. Along



with the work of the individual there must be public activities that would tend to detect infected and untreated cases, to trace the sources of infection and to institute treatment. Such public activities can best be taken care of in the venereal clinic that is already operating in a number of cities. The clinic is rendering service to the poor though its purpose is wider than just treating poor cases that report to it. The community problem at large should and can be studied by the doctor and social worker in charge. With the aid of public officials suspicious cases can be subjected to examination, immediate contact prevented and a follow-up system instituted. The clinic should be allowed to handle the cases that serve only as a source of irritation to physicians by irregular attendance. The clinic can also be used for laboratory diagnostic purposes by a physician in case his patient cannot afford to pay a consultant's fee. The clinic can become an educational center. In short, the clinic is to fill in all the gaps that would otherwise allow dangerous cases to slip through and endanger the health of others.

#### VENEREAL CLINICS

The practical application of the methods for dealing with the venereal problem is wrought with difficulties, but no disease was ever socially combatted with great ease. There are towns in Ohio as well as in other parts of the country where all the necessary anti-venereal work procedures are carried out with little opposition from the population at large. It requires a healthy social tendency and spirit on the part of individuals coupled with favorable public opinion. As to the establishment of a clinic the proposition usually finds a receptive ear in the communities. However, one encounters obstacles in a number of towns. The city officials who have to endorse and partially finance the proposition often hide behind the cloak of the city's poor financial condition. Valid as this argument is, there were instances when with sufficient outside pressure the legislative body found a way of financing the institution. The chief difficulty is found in the unsocial tendencies cherished by a number of individuals who control the destinies of many cities or by individuals who are closely connected with the officials. It would make good fiction, both humorous and tragic, if the diversified means of opposition to clinic establishment were put in print. But what is most pathetic is an objection unfounded at the present time that there be no social means of caring for venereal disease and that patients in this or that town are able and glad to pay for the adequate care rendered by physicians. And if such a statement comes from the board of health or physicians it is painful. Poverty and wealth are relative terms and while a physician may believe his patient to be able to pay, the social investigator may find that the patient's doctor bill deprives the family of the

most essential needs. And invariably in the same town one can hear contradictory statements from the doctors and nurses as to the number of people sick but poor. But even assuming that all venereal cases are able to pay, are we to be content in letting individuals become continually infected just because there is plenty of money and adequate medical care without seeking means of preventing infection and without attempting to eliminate feeble-minded elements in a town that are widely and openly spreading the germs to old and new victims? Was ever any communicable disease dealt with in this manner?

The chief value of the campaign will be the successful prevention of the spread of venereal diseases if not their total elimination. We get hundreds of letters from various individuals in this state who pitifully cry for help and who deplore the circumstances that made them victims of venereal trouble. It cannot be denied that with at least a certain percentage of patients the acquisition of the disease is a result of a combination of chance events. When boys between the ages of 14 and 20 become the victims of inveterate prostitutes, natural instincts and passion alone cannot be given as an excuse for tolerating such a condition. I am not in the habit of calling venereal patients sinners, but it looks to me like a collective sin to permit wholesale infection and to fail to lend a hand to the campaign. And why should we also permit committees to be burdened with frightful economic losses? It was worth to the government \$100,000,000 to treat venereal diseases in the army—money actually expended in treating venereally infected soldiers, and in attempting to rid the camp zones of opportunities for infection. In private life the diseases spell loss to industries through non-effectiveness, labor turnover and inefficiency. One cannot estimate in dollars and cents the loss of human energy through the acquisition of the disease. As we learn of the terrific waste caused by venereal diseases, the progressiveness of the medical men and of health authorities will be measured by the amount of preventive work they are doing. Opportunities for prevention must come through legislation supplemented by intelligent and volitional activity on the part of those who are to help carry out the anti-venereal program. Without public sentiment, without intelligent cooperation, there will be opposition, friction and inefficiency.

The work is big and as one man in the Public Health Service puts it, bigger than any one of us and all of us taken together. The problem concerns the most vital aspects of social life and no effort must be spared toward its solution.

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*Anesthesin* (Calco)—A brand of benzocaine complying with the N. N. R. standards (see New and Nonofficial Remedies, 1920, p. 33). Calco-Chemical Company, Boundbrook, N. J.

## Get Acquainted with Toledo



The substantial and beautiful structure pictured above is the new home of the Academy of Medicine of Toledo and Lucas County, host to

the Association at its annual meeting in Toledo on June 1, 2 and 3. In the past, meetings of the academy have been held in rented quarters but there has been a growing desire that the organization should have a permanent place in which to hold its weekly meetings, section sessions and house its medical library. Recently, by a fortunate turn of circumstances, the academy was able to purchase the Hurd Democratic Club House, Monroe and Fifteenth Streets, which is admirably suited to its needs. The library occupies a portion of the ground floor, while the balance of this floor and the basement have been leased to the District Nurses' Association. The hall of the second floor is used for general meeting purposes and a number of smaller rooms for committees. The local dental association has been invited to hold its meetings in the building.



Court House Square, the heart of Toledo. The large building on the left is the Y. M. C. A. building, headquarters for the State Association meeting, housing section and general meetings and exhibits. Adjoining this on the right is the Elks Club, which will also be used for meeting purposes.



## Compulsory Health Insurance and its Objections as Viewed by Business and Industry

As anticipated several months ago, New York State is the battle ground on which legislation looking toward the inauguration of compulsory state health insurance is to be given its first real test. The following report formulated by the committee on insurance of the Chamber of Commerce of New York State and unanimously adopted by that body on April 1, is singularly interesting in reflecting the attitude of business and industry in opposition to the Davenport bill now pending in the legislature of that state, and contains a number of concise arguments against similar proposals from the standpoint of economics.

*"To the Chamber of Commerce:*

*Whereas, On February 6th, 1919, your Committee on Insurance reviewed the earlier action of the Chamber with regard to certain bills in Albany, providing, in varying forms, for compulsory health insurance, and then restated its belief that a commission should be created to study the whole matter before any legislation of this character was undertaken by this state; and*

*"Whereas, The committee's recommendations at that time were approved by the Chamber, but so far as your committee is informed no commission has ever been created and no comprehensive study of the subject has been made on behalf of the state; and*

*"Whereas, Senator Davenport has introduced in the upper house of the legislature, Introductory, No. 986, a bill 'to conserve the human resources of the state by establishing for employees a system of mutual health insurance funds, constituting Chapter 171 of the Consolidated Laws; and*

*"Whereas, Said bill if enacted will make health insurance after the first of April, 1921, compulsory upon every employee in the state, with minor exceptions, without physical examination; and*

*"Whereas, Further study of the whole subject has convinced your committee that compulsory health insurance attacks the problem from the wrong point of view, and that it is economically unsound and thoroughly unwise. In support of which conclusion your committee submits the following general observations:*

1. It is opposed to sound public policy in a democracy, in fostering objectionable class distinction and a dangerous tendency towards a stratification of industrial society.
2. It is opposed to public policy in encouraging public extravagance, largely through the employment of unnecessary officials and other functionaries.
3. It is opposed to public policy by giving encouragement to socialistic tendencies, and the further and dangerous enlargement of the sphere of the State.
4. It is opposed to public policy in favoring a further encroachment upon private rights and privileges, including the most personal concerns of the individual, and the supervision, control and direction of the person in matters of health and welfare.
5. It is a danger to democracy, in that the promises made are impossible of fulfillment, and on this ground will ultimately create an unwholesome industrial unrest.
6. It is a delusion in that the poorest poor, who are most urgently in need of sympathetic medical and financial support and assistance are largely if not wholly outside the sphere of social insurance activities of any and every kind.
7. Such demand for compulsory health insurance as exists has been artificially created by a skillful propaganda.
8. It is opposed by conservative leaders of organized labor in this country and abroad.
9. It is opposed by business interests as visionary and dangerous and unnecessary class legislation.
10. It is at best a palliative, and does not reach the seat of the difficulty.
11. It does not promote the health of the individual, but rather fosters a tendency toward malingering and an undue prolongation of minor ailments for the purpose of wrongful gain.
12. Experience in other countries shows that medical treatment under its rules results in a standardized method of mediocre medical practice—the doctor who gives his whole time to the service reduces his profession to a mere trade; the doctor who gives only part of his time to the practice is bound to give it indifferent attention.
13. Experience abroad has also shown that medical practice under this system tends strongly toward a system of public medicine, opinion being divided as to whether under such a system private practice should be allowed at all, or whether the system should be universal; in other words, whether the doctor should become a state employee, leaving private practice and the work of the specialists to the few who are unwilling to submit themselves to state control.
14. All the estimates in England have been more or less at variance with actual experience. The state contribution has been very much greater than had been assumed would be necessary at the outset.
15. English experience shows the original assumption as to benefits were erroneous, and a continuous agitation exists in favor of an increase in benefits. This applies to the work

of those who have the work of administration, and particularly to the fees of the doctors as well as to the benefits guaranteed.

16. We are informed that in Great Britain it is absolutely impossible to fulfill the promises held out by Mr. Lloyd George in 1911. Some facts from the British experience are informing—

- (a) Beginning with the non-contributory old-age pensions as a gift to the poor, the British nation assumed a responsibility of possibly £30,000,000 per annum.
- (b) This during the war was followed by out-of-work donations costing not far from £50,000,000 per annum; and a bread subsidy estimated at £60,000,00 per annum, and in addition, allowances on account of coal prices equivalent to a subsidy of £30,000,000 per annum.
- (c) On a basis of the best data obtainable, the British government's grants and gratuities and subsidies of all kinds under national health insurance cannot be less than £30,000,000 per annum.
- (d) Or a total of probably not far from £200,000,000 per annum, in grants, gratuities and subsidies. *These do not include the poor law expenditures, war pensions, etc.*

17. Experience in Germany has been similar to that in Great Britain.
18. Compulsory health insurance is an elaborate bureaucratic scheme which controls wage-earners' lives and wage-earners' incomes. The hope held out that the institution to be created will be thoroughly democratic, and, apart from the overhead charges, self-sustaining, never has been and probably never will be realized. Control of essentials soon passes into the hands of the state authorities, with a corresponding increase in the power of bureaucracy.
19. Generally speaking we have made greater progress in sanitation, in the reduction of the death rate, in the development of voluntary health promoting agencies and all that goes with it, than any other country in the world; and

"Whereas, In addition to these general observations, your committee offers the following observations with regard to this particular bill which we believe to be unAmerican, economically unsound, socially wrong and financially unwise:

- 1. The cost of insurance proper is to be divided substantially equally between the employers and the employees. Some one has estimated the probable annual charge at \$250,000,000. It is further estimated that the fixed overhead charges—one-half of which must be paid by the employees, will amount to \$20,000,000 a year; and although it is difficult to arrive at any estimate of what the state must pay,

over and above the payments from the various funds created, the forecast is from \$8,000,000 to \$9,000,000 per annum is the best your committee has been able to arrive at. This as the plan developed probably would ultimately prove to be underestimated.

- 2. The head of the Health Insurance Bureau which is to be created by the Industrial Commission is given what amounts to autocratic powers over the services of physicians to be employed.
- 3. There seems to be no limit to the expenses which may be incurred.
- 4. Amongst the amounts that may be charged to 'management expenses' of funds is an apparently unlimited authorization for expenses in investigating disease prevention, and instruction in hygiene—excellent undertakings if properly pursued and under proper limitation.
- 5. Under the general head of 'managing and conducting' the business there is apparently no limit whatever fixed as to the expenses which may be incurred; but the various funds must be planned so as to cover whatever may be incurred.
- 6. The insurance of every employee, with the exceptions named, without regard to physical examination or condition, would probably result after a time in a practice under which a person in indifferent health could not get a job anywhere.
- 7. Provision is made to insure people who are not residents of the state, the inherent difficulties of which proceeding do not seem to have occurred to the authors of the bill.
- 8. Appropriations of the New York legislature for all purposes have increased from \$43,000,000 in 1910 to \$117,000,000 this year. Assuming that the state would not have to pay anything beyond the estimated \$8,000,000 or \$9,000,000 overhead charges, there is nothing in the German or English experience to show any reduction in their poor law expenditures, and there is no reason to assume that such a measure here would produce a different experience.
- 9. A proper increase in the activities of the department of public health, better instruction in sanitation and hygiene in the public schools, almost any program that does not invade private rights and impair self-respect, would be welcomed by this and every public-spirited body.

"Resolved, That the Chamber of Commerce of the State of New York is opposed to the passage of what is known as the Davenport Bill, Introductory No. 986, and urges upon the members of the legislature the duty of opposing its enactment into law."



## Compulsory Health Insurance Problems as Viewed by the Profession in Other States

The following editorial article on "Compulsory Health Insurance" is in effect a resume of the attitude of the medical profession in Indiana, Michigan, New York and elsewhere, and appeared recently in the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION, and in which "respects" are paid to those members of the medical profession who favor the proposal and particularly to the American Association for Labor Legislation. The article is of particular interest in containing a brief recapitulation of developments in the various states.

\* \* \*

It is very evident that the Indiana legislature at an early session will be called on to consider the subject of compulsory health insurance, and we warn the members of the Indiana medical profession to be on guard if they are to prevent the enactment of legislation that will be a menace to the interests of medical men, to say nothing of being of little or no value to the public. Our committee on Civic and Industrial Relations, inaugurated this year, has plenty of work cut out for it in studying the subject of compulsory health insurance and equipping itself with such data as will be found necessary in order to speak intelligently for the profession on the subject. Already the Council on Public Health and Education of the American Medical Association, the president of the American Medical Association, and a certain Dr. Rubinow, the latter in a dual role of representative of the American Medical Association and paid employee of the American League of Labor Legislation, are accused by the journals of the state medical societies of New York, Illinois and Michigan, with taking a startling as well as a threatening stand concerning compulsory health insurance. It would be well for the members of the Indiana State Medical Association to decide whether a few officers of the American Medical Association are going to railroad us all into the support of compulsory health insurance, or be compelled to submit to a decision from the majority of the members of the American Medical Association on a question of such vital interest. While we feel that the subject of compulsory health insurance should be studied carefully, and its merits and demerits presented before the rank and file of the medical profession, we have only condemnation for the plan of a certain group of medical men, aided by a few labor leaders, to introduce compulsory health insurance bills in various states of the Union and secure prompt action on the same before the profession has had an opportunity of knowing exactly what they are up against. That the Indiana medical profession may know what is going on, and some of the methods that are being pursued, we reproduce in

part from THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY an editorial concerning some of the activities in connection with compulsory health insurance, which is as follows:

1. All the agitation, all the framing of bills and their introduction into the various state legislatures have been prepared under the auspices of the American Association for Labor Legislation with headquarters in New York City. The secretary is John B. Andrews, and the letter-heads bear the names of Alexander Lambert, I. M. Rubinow, Andrew Fusereth of the Seamen's Union; John Mitchell, labor leader; Royal Meeker, labor commissioner, Washington; Jane Adams, Samuel A. Lewisohn and a sprinkling of more or less well known people in social work and politics.

2. This labor legislation association has had its bill for compulsory insurance introduced in nine states to date—New York, New Jersey, Massachusetts, Connecticut, Pennsylvania, Ohio, Illinois, Wisconsin and California.

3. Commissions were appointed in eight states to study and report on the measure. The first Massachusetts commission reported in favor of the plan. A second commission reported against it and several attempts by the advocates to incorporate provisions for compulsory insurance in the new constitution have failed. Wisconsin and Connecticut reported flatly against it. New Jersey and Ohio reported in favor, Illinois and Pennsylvania asked for more time for consideration. Later Illinois reported against it.

4. Two commissions with Dr. Rubinow as paid expert counsel reported in favor of the social insurance in California. Dr. Rubinow conducted an active campaign in its favor but when it was put to a referendum vote, the people of California voted it down almost three to one. There were 358,324 votes against and only 133,858 in favor.

5. New York has been fighting for three years. In a letter to me, dated Nov. 20, 1919, John B. Andrews, secretary of the American Association for Labor Legislation, wrote:

"Under separate cover, I am sending you a copy of the health insurance bill as it passed the senate of New York last April. It failed to pass the house due to the autocratic action of the speaker who held the bill in committee."

6. In 1917, the American Medical Association took the stand that it would be neutral on this question and advised its study by state commissions. In 1920 the American Medical Association is still assuming to be neutral and is advising us to be neutral.

7. While we are advised to be neutral, the president of the American Medical Association and Dr. Rubinow, who had been chairman of the national investigating committee for the American

Medical Association, are fighting in the open, shoulder to shoulder, with this American Association for Labor Legislation, and thereby carrying the impression that the great American Medical Association is behind the scheme.

8. The president of the American Medical Association and Dr. Rubinow have taken this position in the face of the fact that according to Dr. Green, secretary of the Council on Public Instruction, an overwhelming majority of the medical profession have been against the plan, in the majority of states in which compulsory insurance has been discussed. Dr. Green wrote me under date of Nov. 20, 1919:

"Unfortunately, in the majority of states in which this question has come up for discussion, the medical profession has been divided into two camps; the first a small group, influenced by the attitude of theoretical sociologists in favor of the plan, and an overwhelming majority who were violently opposed to the proposition without investigation, because they feared it would interfere with their business."

9. We must assume that the medical profession of New York are men of at least ordinary brains and intelligence and if after three years of fighting and propaganda, they are still opposed to the measure, it would seem that the purpose of further delay for investigation was not prompted by a desire to educate but in a determined effort to tire out the opponents of social insurance. Particularly, when you consider the attitude of Dr. Lambert, president of the American Medical Association. His association is pledged to neutrality, but as president he does not seem to be bound by the laws of the association.

10. New York is entering on its fourth year of fighting this measure. These men believe that the proposed compulsory insurance is a menace not only to the worker himself, but to the taxpayer and citizen and that it means the death blow to the practice of medicine. What support are they receiving from the association and its official journal? THE JOURNAL says that New York will be a good state in which to make a test and nothing more.

11. The Schenectady County Medical Society of New York has raised the issue squarely. They ask the aid of Michigan in finding out whom the officers of the American Medical Association represent. Is it the men who elected them to their offices or do they represent the American Association of Labor? Shall an association be pledged to neutrality and its officers and journal permitted to send out propaganda in favor of a measure which is being bitterly fought in many states?

12. "The strength of the wolf is the pack and the strength of the pack is the wolf." At best, this question of compulsory medical insurance is of very questionable value to the American citizen, be he laborer, professional man or ordinary

citizen. It has worked out badly in many places where it was tried. In one country there were 1,100 strikes of physicians; but be its merits or demerits what they may be, can we afford to let an association and a journal which has been built up by the efforts and money of the medical fraternity be turned over to any association whether it be labor legislation or any one else without the consent of its members? This is what is being done today by the president of the American Medical Association and the propaganda sent out by the American Medical Association.

13. To remain neutral, while the opposition smashes down defenses and builds intrenchments, does not seem a very wise policy.

\* \* \*

This year will be a great year for politics, and it may not be amiss for the medical man to find out the attitude of various candidates for political offices toward medical and public health questions. There is absolutely no reason why doctors should vote for office-seekers who are known to be antagonistic to the medical profession, the establishment of right and progressive standards for the practice of medicine, and approved health legislation. The time to settle the question is before nominations are made, but if failure attends the effort to place prospective candidates on record an opportunity is offered in the ballot to satisfy the principles of medical men.

### Health Commissioners Receive Federal Appointments

One hundred and forty Ohio health commissioners, who have been serving in municipal and general districts of the state under the Griswold Health Law, have been appointed assistant collaborating epidemiologists by the United States Public Health Service.

With their appointment they also receive the privilege of using franked mail for their morbidity reports, and these reports may be submitted to the State Department of Health in the franked envelopes. As other districts, which have not as yet appointed their commissioner make the choice, each will be given the same privilege as the ones now holding it. The men who have been chosen by the U. S. Public Health Service will receive \$1 a year for their work.

Franked report cards have been placed in the hands of 8,089 Ohio physicians that their reports of communicable disease may be submitted to the State Department of Health more quickly than formerly.

*Phenacaine* (Werner)—A brand of phenacaine complying with the N. N. R. standards. Werner Drug and Chemical Company, Cincinnati, Ohio (Journal A. M. A., March 27, 1920, p. 889).



## OHIO HOSPITAL NOTES

The State Board of Administration is still seeking a location for the new institution for the feeble-minded. Little interest has been shown by county and civic bodies in securing the hospital and practically all sites which have come to the board's attention have been offered by individuals desiring to dispose of their holdings. A tract of about 1,000 acres is needed.

—St. Vincent's Hospital, Toledo, has recently opened a conference room for the use of the staff. The monthly meetings of the staff have been transformed under the leadership of Dr. C. D. Selby into conferences of real scientific value. Obscure and interesting cases are presented and discussed from the standpoint of diagnosis and treatment. A member of the staff is selected to present some special phase of medicine at each one of these meetings. Flower Hospital has instituted conferences of the same character.

—Dr. Edward Remy of Mansfield has purchased the interest of Dr. A. J. Brainard in the Crawford County Hospital at Bucyrus, the latter physician having entered private practice there.

—A health campaign covering every part of Summit County was instituted in March and carried on during April. One of the principal objects of the campaign was to arouse interest in the \$1,000,000 bond issue submitted to voters on April 27 for the erection of a county hospital which is considered essential in the solution of health issues facing Akron and Summit County.

—Dr. Robert S. Barton has been elected president of the Union Hospital Association, New Philadelphia.

—Members of the medical staff of St. Elizabeth's Hospital, Dayton, have approved the plan of placing graduate nurses on the floors of the institution, which has been adopted following the discontinuance of the nurses' training school.

—The administration of the Robinwood Hospital, Toledo, has been turned over to the Lutheran Benevolent Society and it is the intention of the new trustees to make extensive improvements in the near future. The staff of the hospital remains unchanged.

—A trust fund of \$100,000 is given to Huron Road Hospital, Cleveland, by the will of Mrs. Ella A. Stone, a late resident of Cleveland.

—State Auditor Donahey has recently held meetings with members of the governor's committee on the proposed Ohio Hospital for Crippled Children, for which \$90,000 has been appropriated. He urges that the money available be put into a site and the hospital started, after which the legislature can be asked for additional funds.

—Franklin County Commissioners have awarded the contract for a children's pavilion at the county tuberculosis hospital.

—A statement issued by officials of the Ohio State Tuberculosis Sanatorium, Mt. Vernon, anticipates a marked increase in the tuberculosis death rate for 1919 and 1920 due to the effects of influenza. Forty per cent. of 588 cases admitted to the sanatorium since January 1, 1919, show influenza as an exciting cause, the report states.

—Surgical and medical clinics held by the staff of St. Rita's hospital, Lima, April 6, were widely attended by physicians in central and northwestern Ohio. The program lasted throughout the day and included surgical, medical, dental, eye, ear, nose and throat, pediatric, neurological and psychiatric, and genito-urinary and venereal clinics.

### Health Commissioners to Hold First Conference

May 12, 13 and 14 are the dates set for the first conference of Ohio Health Commissioners who have been appointed under the Hughes Law as amended by the Griswold Act. The meeting will be held in the New Southern Hotel in Columbus with members of the Ohio Public Health Council present to meet the new officials.

The conference will convene Wednesday afternoon. It is planned to have Governor Cox give an address of welcome after which Dr. Allen W. Freeman, Commissioner of the State Department of Health, will outline a program of work to be undertaken by the commissioners in their own districts and in cooperation with the state department. On Thursday there will be morning, afternoon and evening sessions. Exhibits and moving pictures will be a part of the features for the evening entertainment and will be on various phases of public health work. A luncheon in the Winter Garden of the New Southern Hotel will be served to the guests at noon on Thursday. Members of the Ohio Society for the Prevention of Tuberculosis have planned to be present at this luncheon. The conference will adjourn after the morning session on Friday.

One of the most interesting questions which will be discussed by the city commissioners at the conference will be the problem of a pure milk supply. Practically every city in the state has such a problem to face and the health commissioners at this conference will be asked to plan a way in which cities may be supplied with milk of standard quality.

During this time, the general health commissioners will be carrying on a round table discussion, presided over by Dr. Frank G. Boudreau, head of the division of communicable diseases. Here queries relative to all disease problems will be answered for the commissioners.

# THE CANCER CAMPAIGN

It is fitting that the State Association's Committee on Control of Cancer, after conducting a six months' intensive campaign within the ranks of the physicians to bring about a more general knowledge of the diagnosis and treatment of cancer, and eventually curb the inroads of this dreadful disease, should in its final efforts for the present fiscal year seek to extend this knowledge to the laity and secure its assistance. We present herewith the committee's program for Cancer Week, the final week of the campaign and urge the cooperation of every member of the Association.

## COMMITTEE ON CONTROL OF CANCER

Andre Crotti, M. D., Chairman  
Columbus  
Chas. W. Moots, M. D., Toledo  
Chas. E. Holzer, M. D., Gallipolis  
Don K. Martin, Secretary  
Columbus

## Cancer Week for Laity Begins May 9th

The Committee on Control of Cancer has selected the second week of May, beginning May 9, to exert a concerted effort to reach the laity on matters concerning cancer. Propaganda within the medical profession has been carried on extensively during the winter, and it is now the aim of the committee to reach the public as thoroughly as possible. With this end in view the State of Ohio has been divided into eleven districts, selecting important and populated towns as the centers of the districts. At the head of every district a chairman has been appointed, and he, in turn, has appointed in every county a chairman who is responsible to him for the campaign in his county. The chairman usually selected is the president or secretary of the county medical society.

The chairmen of the districts are as follows:

Dr. Joseph Ransohoff.....	Cincinnati
Dr. L. G. Bowers.....	Dayton
Dr. F. E. Bunts.....	Cleveland
Dr. J. A. Sherbondy.....	Youngstown
Dr. E. J. March.....	Canton
Dr. R. V. Luce.....	Akron
Dr. J. C. M. Floyd.....	Steubenville
Dr. H. T. Sutton.....	Zanesville
Dr. C. W. Moots.....	Toledo
Dr. C. E. Holzer.....	Gallipolis
Dr. Andre Crotti.....	Columbus

The chairmen of the county societies have selected as speakers from among their members those men who are considered best suited to the purpose. The plan of attack is as follows:

1. May 9th being Sunday, a concentrated effort will be made to reach the rural districts on that day. With this end in view, speakers will be detailed to speak in churches, after having, of course, first obtained the consent of the ministers in charge. If speakers are not available, pamphlets dealing with the cancer subject will be sent to the various ministers and their cooperation will be solicited, asking them to kindly read these pamphlets to their congregations on that Sunday.

2. During the week, in the more populated centers, various meetings of the public will be held at which speakers will deliver the cancer message. Women's clubs and associations especially will be sought.

3. The cooperation of the moving picture shows will be asked and a few of the fundamental principles of the knowledge of cancer will be flashed upon the screen.

4. The cooperation of the daily press will be secured. This means of propaganda throughout the state is certainly the most important and the most effective. Mr. George Burba and Mr. W. A. Ireland, editor and cartoonist, respectively, of the *Columbus Dispatch* have assured their cooperation in this matter, and most of the press of the state will kindly help in spreading better knowledge of the cancer menace.

5. The speakers in the various districts will be provided with lecture outlines secured from the American Society for the Control of Cancer, and with pamphlets dealing with the fundamental facts of cancer knowledge put out by the United States Public Health Service. This literature contains all the necessary data and information that the speakers need in their talks before the public.

Speakers have been instructed by the committee to be very plain and simple in their speeches, avoiding as much as possible all scientific terms. Truth, simply spoken, will be far more effective than hiding behind vague words. The message that is to be conveyed to the public is not one of despair, but rather of hope. Cancer recognized early and treated early with appropriate methods is a very hopeful disease, whereas, if allowed to progress beyond a certain stage, it becomes hopeless. If the entire membership of the Association will cooperate in the Cancer Week campaign as enthusiastically as the chairmen of the various districts and the county medical societies, the success of the campaign will be assured and much good will be derived from it.



## Uncle Sam in Ohio

### A Description of the Function and Activities of the Ohio War Risk Insurance Bureau

By Starling S. Wilcox, M. D., State Supervisor

Complying with a request, to give the readers of *The Ohio State Medical Journal* an idea of the work being carried on by the U. S. Public Health Service in this state the above caption was selected.

The history of the United States Public Health Service dates from July 16, 1798, when Congress passed an act for the relief of Sick and Disabled Seamen. From this beginning, there has developed the present huge organization which in Ohio alone operates 57 hospitals, many relief stations, and carries a professional personnel of one hundred and sixty-two.

The United States is divided into fourteen districts with U. S. Public Health Service Offices also located at Porto Rico, Philippine, and Hawaiian Islands. In Cincinnati is located the Seventh District Headquarters, the Supervisor being Major Henry Ladd Stickney (R), who has jurisdiction over Ohio, Indiana, and Kentucky, and is successfully establishing a system of efficiency, reaching out to the cross roads, the hamlets, and embracing the intermediate towns and the largest cities in the States.

When District Headquarters was first established, the never ceasing labor to reach every ex-service man in the State devolved upon the personnel of that office. It was soon realized that a sub-station, so to speak, in each state, would greatly facilitate the work.

The office of State Supervisor for Ohio, located in Columbus, 74 East Gay Street, began to function the 2nd of February, 1920, and is now in touch with a selected physician, in each county in the state.

The physicians in towns less than 70,000 are called "Designated Examiners," while in the larger towns and cities, "Units" have been established. In some counties where the work is unusually heavy, more than one Designated Examiner may be appointed. Each Designated Examiner is on a fee basis, and also has authority to call in consultants when special examinations are necessary.

The appointment of Designated Examiners and other physicians, surgeons, specialists and dentists completing the various Units through the state enables Uncle Sam to furnish professional services to disabled soldiers, free of charge, and there is no reason for any claimant to employ a physician, surgeon, specialist or dentist not connected with the U. S. Public Health Service.

The cases of emergency which demand the immediate attention of the nearest physician are provided for, inasmuch as reimbursement for such emergency treatment will be forthcoming upon the proper presentation of the "exigency of the case" to District Headquarters.

The readers of *The Ohio State Medical Journal* will not only save the ex-soldier unwarranted expenditure if they take occasion to promulgate the above facts, but will forewarn the physicians, surgeons, specialists and dentists not connected with the U. S. Public Health Service of the possible refusal of reimbursement for services rendered.

Where claimants are sent to hospitals or specialists located in Columbus, the Ohio physicians of the U. S. Public Health Service are instructed to route them through the office of State Supervisor, except in cases of emergency. Emergency patients can be sent direct to the hospital, with instructions that the hospital authorities notify the surgeon or physician of the Unit.

When sending patients to hospitals or specialists not in Columbus the claimant must be routed through the Director of the Unit located in the town where the patient is to be sent, except in emergency cases when the patient may be sent direct to the hospital with the instructions that the hospital authorities notify the Director of the Unit.

In an article limited as this one must be, only an outline of the working scheme can be given. To illustrate: A disabled ex-service man is entitled to compensation. He immediately applies to his county Designated Examiner or the Director of the Unit and presents his credentials—his honorable discharge—and if these papers have been lost, a sworn statement from his Company Commander, or in lieu of this, a sworn statement from three of his friends that he is an ex-service man. The Designated Examiner, the Red Cross Chapter, and the agents of the American Legion located in the various town are supplied with blanks (526) and have received instructions from Headquarters how to proceed. The Designated Examiner's field of labor is not, however, limited to the claimants who may voluntarily call upon him, for many ex-service men are daily being authorized by letter (91) from Washington to appear for examination and re-examination. "Letters of inquiry", "letters of explanation", and a few "letters of complaint" are always in evidence and add to the volume of work.

The claimant is examined and his examination blank (28) is attached to form 526 and all forwarded to Washington through District Headquarters, carbon copies being retained by the Examiner. The claimant's degree of disability is determined by a Board in Washington and a claim number, which becomes a part of his name, is issued to him. For example: John Stanley Smith, C-549117. It would be as much an oversight to call the claimant John Stanley

Smith as to call him John Stanley after he has once been given his claim number.

The preliminary work necessary to the completion of form 526 is often done by the American Legion and Red Cross agents, and it may be noted that their harmonious co-operation has greatly decreased the detail work of the examiners.

The following case recently came to the attention of the State Supervisor and will show the quick results characteristic of the efforts of the American Legion:

A war bride came to the Legion regarding reimbursement for the funeral expenses of her deceased husband. She was totally ignorant of the benefits to be derived from the War Risk Insurance and was uninformed regarding the U. S. Public Health Service. Through the efforts of the American Legion, Department of Ohio, she was not only reimbursed for funeral expenses, but was given the monthly installments due her on the policy of her deceased husband, and is now receiving \$57.50 monthly payments.

In spite of thousands of circulars and public notices, many ex-service men are uninformed regarding the purposes of the Government.

It is impossible for a Designated Examiner to be in touch with all ex-service men in his county, therefore it might be well to state that those interested may obtain the addresses of officers of the U. S. Public Health Service from the local postmaster, from the American Red Cross, from the American Legion, and from State and Municipal Health Offices. Furthermore, it is well to know that the Government is not only prepared to furnish compensation and vocational training for disabled ex-soldiers, but has enacted a law whereby the U. S. Public Health Service must furnish relief to any sick and disabled soldier, sailor or marine, army and navy nurse (male and female) who was discharged on or after April 6, 1917, and is seeking treatment for disability due to illness or injury incurred previous to discharge from the service and not due to his own misconduct. Venereal diseases are classified as being caused by misconduct, and the U. S. Public Health Service has no funds for the care of such cases.

To illustrate the untiring efforts of the Government to get in touch with all disabled ex-soldiers, the following instance is related: One of the examiners from the Supervisor's office was recently "requested to proceed" to a certain little town, for the purpose of locating an ex-service man residing somewhere in the Cumberland mountains.

After leaving the railroad station, he first established the fact that he was not looking for hidden stills, then he hunted up a boy who secured two mules. After a trip, most of which was "up stream", there being no roads, the water at times so deep that the riders were compelled to sit on their own feet, a mountain pass was

located through which the doctor and his guide slowly proceeded (the doctor made mention of the fact that he felt as if some one out in the "laurels" had an eye on him the entire journey) until finally they came to a clearing. In the clearing was a house and in the house, the claimant. Compensation will be forwarded to the claimant and the joy and comfort afforded can be easily imagined.

The Government is making continuous efforts to locate disabled ex-service men and when reached, by means of carbon copies and carefully filed reports, he is never entirely lost sight of. After he has received his "C" number, he is in even closer touch with the Government. To be sure, an individual case crops up now and then where there is seeming neglect, but it should be remembered that there are some 223,000 ex-service men in Ohio.

The number of potential claimants, in the United States, may be conservatively estimated at near a million, and the demands upon the U. S. Public Health Service will increase daily and be prolonged far into the future.

The work of the Designated Examiner is not restricted to office examinations, as many ex-service men are located in rural districts. Should the call necessitate a long drive, provision is made for an additional fee. If the case justifies, the ex-soldier is transferred to the nearest hospital under contract with the Government, where every care is given him free of charge.

Should John Doe, C-17749, be suddenly stricken with appendicitis, or be seriously injured in a street accident, he is immediately taken to the hospital. The hospital authorities notify the surgeon of the unit, who responds.

Again to illustrate: Suppose Washington desires a re-examination of John Doe, C-17749. John Doe's first examination, we will say, was in London, Ohio. The Designated Examiner there has forwarded his report to District Headquarters. The London, Ohio, Designated Examiner is communicated with regarding the claimant. After investigation, it is found that the claimant has been seized with an acute attack of wanderlust and when last heard from was headed for Rutland, Vermont. This information is forwarded to District Headquarters and the surgeon in charge of the Unit in Rutland is communicated with. For some time, John Doe, C-17749, cannot be found, but finally he is located on a farm. He is at once notified to appear for examination. Reports are forwarded to Washington through proper channels and the man is again in close touch with Uncle Sam.

It is readily to be seen that an endless chain connects the U. S. Public Health Service with the ex-service man.

To illustrate the splendid co-operation of the Red Cross, the following instance is related:

A well developed and upstanding chap, suffering from loss of memory, came to the notice of



the Supervisor's office. The aid of the local Red Cross Chapter was requested. After many efforts to locate the boy's parents, resulting in failure, we were all much concerned. The case was not of the kind permitting commitment, neither would hospitalization avail, as the lad would slip out and disappear for days. The last time the Red Cross located him, a rumpled little wad of dirty paper was found upon him, which proved to be a valuable clue. The local chapter at once wired the local chapter in a distant city and it is pleasing to note that the final curtain staged a joyful reunion.

In the event John Doe is ordered from his home to some other point for examination, he is provided with transportation, hotel and restaurant slips. In addition he is reimbursed for the time lost going to and returning from his destination, in case he is in active employment at the time of the summons.

The Government provides for all emergencies as shown by the following case: A claimant terribly maimed by a hand grenade explosion came to the office of the State Supervisor for examination of his artificial hands, which were not functioning to his satisfaction. The artificial digits were purchased in an eastern city, and in order that they might be repaired by the manufacturer transportation and subsistence slips were furnished the claimant and an attendant.

It is not the purpose of the U. S. Public Health Service to supervise the insurance and the vocational training of disabled ex-service men, but the physical condition of all claimants must be ascertained and recorded, and in order to accomplish this monumental task, with the least delay, a working force commensurate with the undertaking is on duty.

The following list of the medical officers associated with the U. S. Public Health Service in Ohio, will afford the information necessary to the proper direction of ex-service men seeking aid.

#### OHIO PHYSICIANS ASSOCIATED WITH U. S. PUBLIC HEALTH SERVICE

Counties	Towns	Physicians
Adams, West Union	Des. Ex. Dr. O. T. Sproull	
Allen, Lima	Des. Ex. Dr. E. D. Sinks	
Ashland, Ashland	Des. Ex. Dr. Clark C. Patton	
Ashtabula, Ashtabula	Des. Ex. Dr. Azro J. Pardee	
	Neuro P. Dr. C. C. Campbell	
Athens, Athens	Des. Ex. Dr. John Rollin Sprague	
Auglaize, Wapakoneta	Des. Ex. Dr. Geo. E. Faulder	
Belmont, Bellaire	Des. Ex. Dr. Fred Schell Wright	
Brown, Georgetown	Des. Ex. Dr. Edwin D. Jackson	
Butler, Hamilton	Des. Ex. Dr. A. L. Smedley	
Butler, Middletown	Des. Ex. Dr. E. O. Bauer	
Carroll, Carrollton	Des. Ex. Dr. R. T. Shipley	
Champaign, Urbana	Des. Ex. Dr. David Moore	
Clark, Springfield	Unit	
	Drs. Alfred H. Potter, Director; F. A. Hartley, E. E. N. & T.; W. P. Ultes, X-ray; J. A. Link, Surgeon.	
Clermont, Batavia	Des. Ex. Dr. F. A. Ireton	
Clinton, Blanchester	Des. Ex. Dr. Robert Conard	
Columbiana, East Liverpool	Des. Ex. Dr. Marle McCutcheon	
Columbiana, Salem	Des. Ex. Dr. Ludwig Derfus	
Coshocton, Coshocton	Des. Ex. Dr. Sam D. Cohen	
Crawford, Galion	Des. Ex. Dr. Mart L. Helfrich	
Crawford, Bucyrus	Des. Ex. Dr. Wilbur Carlisle	
Cuyahoga, Cleveland	Marine Hospital	

#### Counties Towns

Cuyahoga, Chagrin Falls	Des. Ex. Dr. E. F. Wakefield
Darke, Greenville	Des. Ex. Dr. Albert Sarver
Defiance, Defiance	Des. Ex. Dr. Geo. E. Wynn
Delaware, Delaware	Des. Ex. Dr. Victor B. Weller
Erie, Sandusky	Des. Ex. Dr. P. F. Southwick
Fairfield, Lancaster	Des. Ex. Dr. Chas. Hamilton
Fayette, Washington C. H.	Des. Ex. Dr. A. H. Woodmansee

#### Physicians

Franklin, Columbus	Office of State Supervisor—Drs. Starling S. Wilcox, P. A. Surgeon (R), Supervisor and Director of Unit; Guy T. Meek, Examiner; J. P. Farson, Examiner; W. F. Millhon, Examiner. Unit—E. J. Gordon, Consulting Internist; Fred Fletcher, Surgeon; E. E. Gaver, Neuro-psychiatrist; J. A. Gould, Neuro-psychiatrist; G. C. Schaeffer, Eye, Ear, Nose and Throat; J. H. Vorbes, X-ray; A. M. Steinfeld, Orthopedist; Dentists: Drs. F. C. Starr, E. M. Hoopman.
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Fulton, Wauseon	Des. Ex. Dr. C. F. Hartman
Gallia, Gallipolis	Des. Ex. Dr. L. C. Bean
Geauga, Burton	Des. Ex. Dr. T. F. Myler
Greene, Xenia	Des. Ex. Dr. H. C. Messenger
Green, Wilberforce	Des. Ex. Dr. Clarence Lindsay
Guernsey, Cambridge	Des. Ex. Dr. Geo. F. Swan

Hamilton, Cincinnati	Office of District Supervisor—Major Henry Ladd Stickney, Surgeon (R), District Supervisor; Drs. Henry C. Gemmill, Executive Officer; E. R. Bush, Asst. Ex. Officer; J. J. Sosnowski, Dist. Med. Inspector; J. Hoffman, Asst. District Inspector; W. A. Jillson, Dist. N. Psychiatrist; McAnvich, Dist. Supt. Dentist; W. H. Hatches, Asst. Supt. Dentist. Unit—Eric Twachtman, Chief of Unit; J. F. Benjamin, Internal Medicine; H. L. Schriever, Attending Surgeon; C. E. Kiely, Neurologist; Edward King, Eye, Nose and Throat; Frank B. Cross, Attending Eye Specialist; Clarence W. Betzner, Attend. Orthopedist; R. W. Staley, Urologist; Kennon Dunham, X-ray; John A. Caldwell, Neuro-Surgeon; L. M. Cusber, Examiner, P. A. Surgeon; J. D. Wakefield, Examiner; D. S. Heyn, Examiner; L. A. Maloney, Examiner; C. S. Thomas, Examiner; Edw. J. Kennedy, Examiner; R. W. E. Irwin, Examiner; J. A. Smith, Resident Phy. at Cincinnati Gen. Hospital.
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Hancock, Findlay	Des. Ex. Dr. John M. Firmin
Hardin, Kenton	Des. Ex. Dr. D. H. Bowman
Harrison, New Athens	Des. Ex. Dr. J. A. McGrew
Henry, Napoleon	Des. Ex. Dr. T. Thomas Quinn
Highland, Hillsboro	Des. Ex. Dr. John C. Larkin
Hocking, Logan	Des. Ex. Dr. Edward E. Campbell
Holmes, Millersburg	Des. Ex. Dr. I. S. Putnam
Huron, Norwalk	Des. Ex. Dr. John A. Sipber
Jackson, Jackson	Des. Ex. Dr. John W. Harbarger
Jefferson, Steubenville	Des. Ex. Dr. J. E. Miller
Knox, Mt. Vernon	Des. Ex. Dr. J. C. Claypool
Lake, Painesville	Des. Ex. Dr. Edward S. Jones
Lawrence, Ironton	Des. Ex. Dr. Oscar Henninger
Licking, Newark	Des. Ex. Dr. Harry Postle
Logan, Bellefontaine	Des. Ex. Dr. A. J. McCracken
Lorain, Elyria	Des. Ex. Dr. J. B. Duncan
Lorain, Oberlin	Des. Ex. Dr. Paul C. Colegrove

Lucas, Toledo	Unit—Drs. Frank B. McNierney, Director; W. F. Pilliod, Attending Specialist; B. G. Chollett, Orthopedist; C. E. Fisher, Surgeon; Pringle Tait, Neurologist; Louis Effer, Eye, Ear, Nose and Throat.
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Madison, London	Des. Ex. Dr. Francis E. Rosnagle
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Mahoning, Youngstown	Unit—Drs. F. W. McNamara, Director; Chas. D. Hauser, Attending Surgeon; J. L. Washburn, Eye, Nose and Throat Surgeon; Wm. Blaine, Neuro-psychiatrist.
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Marion, Marion	Des. Ex. Dr. Everett H. Morgan
Medina, Medina	Des. Ex. Dr. Hiram Robinson
Meigs, Middleport	Des. Ex. Dr. Cbas. Poindexter
Mercer, Celina	Des. Ex. Dr. John T. Gibbons
Miami, Piqua	Des. Ex. Dr. M. R. Haley
Monroe, Woodsfield	Des. Ex. Dr. Harvey P. Gillespie

## Counties Towns

## Physicians

Montgomery, Dayton----Unit—Drs. H. H. McClellan, Director, Medicine and Neuro-psychiatrist; A. F. Hewitt, Eye, Ear, Nose and Throat; C. P. Grover, Surgeon, National Military Home; R. C. Shawhan, Reontegenologist, National Military Home; W. S. Early, Dentist.

Morgan, McConnellsville-----Des. Ex. Dr. Louis Marks  
Morrow, Mt. Gilead-----Des. Ex. Dr. A. C. Richards  
Muskingum, Zanesville-----Unit—Drs. Edmund Brush, Director; Chas. Higgins, Neurologist; Harry T. Geyer, Eye, Ear, Nose and Throat.

Nohle, Caldwell-----Des. Ex. Dr. Reginald Cleary  
Ottawa, Port Clinton-----Des. Ex. Dr. A. A. Brindley  
Paulding, Paulding-----Des. Ex. Dr. L. R. Fast  
Perry, Somerset-----Des. Ex. Dr. J. C. Fountain  
Pickaway, Circleville-----Des. Ex. Dr. H. D. Jackson  
Pike, Piketon-----Des. Ex. Dr. J. P. Seiler  
Portage, Ravenna-----Des. Ex. Dr. L. R. Prichard  
Prehle, Eaton-----Des. Ex. Dr. H. Z. Silver  
Putnam, Ottawa-----Des. Ex. Dr. C. O. Beardsley  
Richland, Mansfield-----Des. Ex. Dr. Geo. C. Smith

Ross, Chillicothe-----Unit—Drs. A. H. Dunn, Director, Surgeon; Geo. Mytinger, Eye, Ear, Nose and Throat; H. E. Harman, Neuro-psychiatrist; R. W. Holmes, X-ray.

Sandusky, Fremont-----Des. Ex. Dr. Clarence Kuntz  
Scioto, Portsmouth-----Des. Ex. Dr. Jos. S. Rardin  
Seneca, Fostoria-----Des. Ex. Dr. William Leonard  
Seneca, Tiffin-----Des. Ex. Dr. R. R. Hendershott  
Shelby, Sidney-----Des. Ex. Dr. Vernon W. Lemaster  
Stark, Alliance-----Des. Ex. Dr. H. G. Scranton  
Stark, Massillon-----Des. Ex. Dr. L. B. Zintsmaster

Stark, Canton-----Des. Ex. Dr. Geo. Stewart Hackett; Neuro-psy., Dr. John O'Brien.

Summit, Akron-----Unit—Drs. W. M. Leonard, Director; R. V. Luce, Surgeon; A. S. Robinson, Internist; Harold R. Conn, Orthopedist; J. E. Springer, Eye, Ear, Nose and Throat; A. H. Stall, Radiographer; David H. Morgan, Neuro-psychiatrist; C. F. Berry, Dentist; Harold C. Haas, Dentist.

Trumhull, Warren-----Des. Ex. Dr. Thomas Kappenberger  
Tuscarawas, New Philadelphia-----Des. Ex. Dr. W. F. DeMuth  
Union, Marysville-----Des. Ex. Dr. Angus MacIvor  
Van Wert, Van Wert-----Des. Ex. Dr. Chas. Glenn Church  
Vinton, McArthur-----Des. Ex. Dr. Hugh S. James  
Warren, Lehanon-----Des. Ex. Dr. Robert Blair  
Washington, Marietta-----Des. Ex. Dr. A. Howard Smith  
Wayne, Wooster-----Des. Ex. Dr. Thomas Arthur Graven  
Williams, Montpelier-----Des. Ex. Dr. W. H. Steel  
Wood, Bowling Green-----Des. Ex. Dr. J. W. Rae  
Wyandot, Upper Sandusky-----Des. Ex. Dr. J. C. Bowman

# STATE MEDICAL BOARD

At the regular meeting of the State Medical Board in Columbus on April 6 the revocation cases of two physicians and one chiropractor were disposed of.

Pending final determination of charges in revocation of his license, Dr. Edwin Hartley Pratt of Cleveland voluntarily surrendered his license to practice medicine and surgery in Ohio and announced his removal from the state. In consequence of this action, the board directed the secretary to cancel his license and notify the Probate Judge of Cuyahoga county to this effect.

Similarly, Dr. Winthrop Randall, also of Cleveland, waiving further investigation of his practices, voluntarily surrendered his license to practice and announced his intention of ceasing to practice medicine and surgery in Ohio.

Peter James Visser, Cleveland chiropractor, in an advertisement in the *News Leader* under date of March 21, modestly announced his ability to relieve all suffering of a physical nature. Unfortunately for Peter, he included the words "Bright's disease and diabetes" and the board, acting under Section 1275, Paragraph 3, revoked his certificate to chiropract further in this state.

## PROSECUTIONS

E. C. Branch, M. D., licensed in New York, representing the Rice Rupture Cure of Adams, New York, was fined \$50.00 and costs in the Cincinnati Police Court on March 24 for advertising himself as a practitioner of medicine before having obtained a certificate from the State Medical Board as required by law.

Charges have been filed in the Mayor's Court of Wooster against D. A. Donovan, optometrist, for announcing or advertising himself as a practitioner of medicine and surgery before he had obtained a certificate from the State Medical Board. Donovan used the unqualified title of "Dr." in his advertisements.

Mary Lottig was convicted in Municipal Court of Cleveland, March 26, of the illegal practice of medicine and fined \$300.00 and costs.

## RECIPROCITY CERTIFICATES

The Board granted reciprocity certificates to the 30 physicians who are listed below, with their schools of graduation and intended Ohio locations:

*Walter Cathcart Arthur*—Graduate University of Maryland 1897; intended residence, Akron.

*Hugh Johnson Baker*—Graduate University of Louisville 1910; intended residence, Hamilton.

*Lottie Cornelia Isbell-Blake* (colored)—Graduate American Medical Missionary College, Bat-

## To Teach Accident Prevention

What is believed to be a step in advance of the school curriculum of any other state in the union has been taken by the Industrial Commission in introducing into the schools of Ohio an auxiliary course in accident prevention. It is the belief of Director of Safety Fred G. Lang, who suggested the course, that the education of children in safe habits of thought and action while in school will eventually be a big factor in reducing industrial accidents. A fund of \$500 has been appropriated with which to start the new work and a simple text for use in the schools has been prepared which coordinates lessons in health, sanitation and safety with other school studies.



tle Creek, Mich., 1902; intended residence, *Columbus*.

*James Everette Burgman*—Graduate Indiana University 1918; intended residence, *Jackson*.

*Charles M. Clark*—Graduate Medical College of Virginia 1913; intended residence, *Akron*.

*Oscar Ray Clovis*—Graduate Jefferson Medical College 1917; intended residence, *Columbus*.

*Arthur Girard Cranch*—Graduate New York Homeopathic Medical College 1906; intended residence, *Cleveland*.

*Ralph Deming*—Graduate Hahnemann Medical College, Philadelphia; intended residence, *Youngstown*.

*James Alexander DeRamus* (colored)—Graduate Meharry Medical College; intended residence, *Cleveland*.

*Ralph Herbert Eisaman*—Graduate Northwestern University 1918; intended residence, *Akron*.

*William Francis Gessler*—Graduate University of Louisville 1917; intended residence, *Niles*.

*Harry Albert Giltner*—Graduate Kentucky School of Medicine 1898; intended residence, *Akron*.

*Hardie Fleming Harris* (colored)—Graduate Meharry Medical College 1905; intended residence, *Jefferson County*.

*Christopher Fairfield Hopson* (colored)—Graduate Meharry Medical College 1918; intended residence, *Franklin County*.

*James Charles Hassall*—Graduate Albany Medical School, Albany, N. Y., 1910; intended residence, *Cuyahoga Falls*.

*William Harold Holland*—Graduate University of Texas 1912; intended residence, *Lakewood*.

*Raymond Charles King*—Graduate St. Louis University 1918; intended residence, *Toledo*.

*Anthony Joseph Lanza*—Graduate George Washington University 1906; intended residence, *Cleveland*.

*Carey Pratt McCord*—Graduate University of Michigan 1912; intended residence, *Cincinnati*.

*Ernest Chester McCulloch*—Graduate Ohio-Miami Medical College 1910; intended residence, *Mansfield*.

*Francis John Osborne*—Graduate St. Louis University 1917; intended residence, *Cleveland*.

*Jesse Lee Paine*—Graduate Eclectic Medical College 1916; intended residence, *Franklin County*.

*Walter Adelbert Samuel*—Graduate Bennett Medical College 1906; intended residence, *Zanesville*.

*John Paul Spooner*—Graduate Rush Medical College 1905; intended residence, *Toledo*.

*John Armstrong Watkins*—Graduate Tulane University College of Medicine 1910; intended residence, *Cincinnati*.

*Clyde Lewis Williams*—Graduate University of Pittsburgh 1897; intended residence, *Youngstown*.

*Arthur Morris Zinkham*—Graduate George-

town University 1912; intended residence, *Warren*.

*Arthur Strong Adams*—Graduate Medical Department of Wooster University 1876; intended residence, *Lakewood*.

*Frank Wilson Brodrick*—Graduate University of Illinois, College of Physicians and Surgeons, 1897; intended residence, *Cleveland*.

*Herbert Wyche Cruik-Shank*—Graduate Harvard Medical School 1895; intended residence, *Troy*.

The regular examinations of the State Medical Board will be held at the State House, Columbus, on June 8, 9, 10 and 11.

### Medical Supervision Inadequate

Lack of medical supervision at the Girl's Industrial School, Delaware, was the principal object of criticism in a report submitted by inspectors in the department of the State Superintendent of Public Instruction after completing a survey of conditions at the Girls' Industrial School and the Boys' Industrial School, Lancaster. The survey was made at the request of the Ohio Board of Administration. Commenting on the situation at the girls' school, the report declares:

"The need of medical examination and of medical, physical and hygiene oversight over these girls has been recognized and enacted into law by the state. The state law requires and provides for the employment of a resident physician who shall be a woman. Medical and physical examinations of every entrant promptly at the time of entrance is imperative here. Correlatively there should be similar examinations in each case before discharge or parole. Occasional or emergency examinations, either physical or medical, may be demanded during the period of residence.

"This is not being done at the Girl's Industrial School because it has been impossible, according to the Superintendent's testimony, to obtain a competent woman physician at the salary allowed. Hence none of this work is systematically done, and the only medical work being done is that by a local physician who merely responds to emergency calls and gives such medical attention is demanded by the cases that require treatment.

"It is a shameful thing for the great wealthy state of Ohio to permit. It seems to result from the lack of an intelligently conceived, administered, and financially supported public policy of the state at large, with reference to the state institutions."

Age-grade tables of the pupils of both schools prepared by the inspectors during the investigations show that the majority are backward or subnormal and some should be in the institution for freeble-minded youths.

## DEATHS IN OHIO

*Edwin R. Baker, M. D.*, Medical College of Ohio, Cincinnati, 1876; aged 68; died at his home in Phillipsburg, March 5, from bronchial pneumonia. Dr. Baker had practiced in Phillipsburg for 18 years. He is survived by his wife, four sons and one daughter.

*Vallandigham Bodey, M. D.*, Starling Medical College, Columbus, 1895; aged 56; died at his home in Dayton, March 22, of heart disease. Dr. Bodey had practiced in Dayton since 1906 when he moved to that city from St. Marys. His widow, one daughter and one son survive.

*Frederick Blecker Callin, M. D.*, Ohio Medical University, Cincinnati, 1893; aged 67; died March 28, in St. Augustine, Florida, where he was spending the winter. Dr. Callin's home was at Akron. He leaves a widow and one son.

*Milton V. Cunningham, M. D.*, University of Illinois College of Medicine, Chicago, 1894; aged 51; died in Orange, California, recently from paralysis. Dr. Cunningham was a resident of Youngstown, having practiced there for 24 years, but several months ago went to California for his health. His widow, one sister and one brother, Dr. William D. Cunningham of Girard, survive.

*Townsend F. Dickinson, M. D.*, Miami Medical College, Cincinnati, 1881; aged 61; died at his home in Cincinnati, March 5. Dr. Dickinson had retired from active practice. He leaves a widow and three children.

*John A. Dickson, M. D.*, University of Wooster, Medical Department, Cleveland, 1876; aged 68; died at his home in Rock Creek, March 19, from pneumonia. Dr. Dickson formerly resided in Ashtabula, where he practiced for 25 years before his retirement and removal to Rock Creek three years ago. A widow and three children survive.

*Edwin M. Goodwin, M. D.*, Albany Medical College, Albany, New York, 1863; aged 77; died at his home in Toledo, March 18, from heart disease. Dr. Goodwin located in Toledo in 1866 and had since practiced there continuously. His widow survives.

*Fred C. Hunt, M. D.*, University of Buffalo Department of Medicine, 1897; aged 44; died in St. Elizabeth's Hospital, Youngstown, March 20. Dr. Hunt was a practitioner in Girard for 22 years. Surviving are a son and two brothers.

*Benton Knox Jones, M. D.*, Eclectic Medical Institute, Cincinnati, 1889; aged 62; member of the Ohio State Medical Association; died at his home in Kenton, March 6, from erysipelas. Dr. Jones was president of the Eclectic Medical Society of Ohio in 1897 and had served two terms as coroner of Hardin County. He leaves his wife, two daughters and two sons.

*John Loren McAllister, M. D.*, Ohio Medical University, Columbus, 1905; aged 39; former member of the Ohio State Medical Association; died at his home in Martinsville, Clinton County, March 12, following an illness of two weeks with influenza. Dr. McAllister moved to Martinsville from Highland eight weeks before his death. He was a veteran of the World War and spent nine months of two years' service in France.

*Fred Carter Newcomb, M. D.*, Cleveland-Pulte Medical College, 1898; aged 52; former member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Akron, March 17, from the effects of influenza. Dr. Newcomb practiced in Mantua for a number of years before locating in Akron, where he specialized in X-ray and electrotherapy. His widow and three children survive.

*Hiram H. Shafer, M. D.*, Western Reserve University School of Medicine, Cleveland, 1882; aged 65; died at his home in Alliance, March 31, from paralysis. Dr. Shafer spent in Alliance 37 of the 42 years in which he practiced. For the past six years he had been in ill health and resided in California a large part of the time. He is survived by his widow, mother and one sister.

*Edgar Albert Tobey, M. D.*, University of Pittsburgh School of Medicine, 1912; aged 45; member of the Ohio State Medical Association and Fellow of the American Medical Association; died from uraemic poisoning, March 25, in Los Angeles, California, where he had gone last October for his health. Dr. Tobey's home was in Youngstown, where he had practiced since 1904. Surviving are his widow and one daughter.

*Fred W. Upson, M. D.*, Western Reserve University School of Medicine, Cleveland, 1882; aged 61; former member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Conneaut, March 19, after an illness of four months' duration. Dr. Upson came to Conneaut immediately following his graduation and practiced there continuously until a few months before his death. He held various offices in the Ashtabula County Medical Society and during the World War was active in organizing the Volunteer Medical Service Corps in his county. Besides his wife, he is survived by two daughters.

*Thomas H. Wilson, M. D.*, Starling Medical College, Columbus, 1869; aged 74; former member of the Ohio State Medical Association; died at his home in Dennison, March 22, from dropsy. Dr. Wilson was a veteran of the Civil War, serving with Company H, 80 O. V. I. He located in Dennison immediately after his graduation and spent his entire professional career there except for six years' residence in Pittsburgh. He leaves a widow, two daughters and two sons, one of whom is Dr. Roy A. Wilson of Dennison and the other Dr. J. M. Wilson of Pittsburgh.





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## MEETINGS OF THE CLEVELAND ACADEMY OF MEDICINE

(Lester Taylor, M. D., Secretary)

The 160th regular meeting of the Cleveland Academy was held in the Auditorium of the Cleveland Medical Library Association, March 19, with President R. H. Birge in the chair.

Dr. Harry G. Sloan presented the clinical history, operative and pathological findings of a case of "Gas Cyst of the Intestine." The general subject of gas cysts was discussed in relation to the intestine. Interesting slides were shown and the theory advanced that these cysts are of mechanical origin, gas being forced through minute abrasions in the mucosa by peristaltic activity.

A paper on "The Effort Syndrome" was read by Dr. John Philips. This instructive paper dealt with the history of the recognition of this condition and described typical cases. The symptomatology, etiology, prognosis and therapy were in turn taken up. Discussion by Drs. Sloan, Corrigan, Moorehouse, Jones and Philips.

Dr. McFarland explained plans for the new city hospital and the academy voted approval of the proposed \$2,000,000 bond issue for that purpose.

After discussion by Drs. Cummer, Tuckerman, Bernstein, Jacobs, Follansbee, Updegraff and Moorehouse, the proposed new constitution was adopted with modifications providing for a reclassification of all members; the raising of dues from \$10.00 to \$40.00 for active members; and the employment of an executive secretary. Dr. Follansbee outlined plans for immediate broadening of the work of the Academy and called attention to the fact that the plan of employing an executive secretary had been the idea of Drs. Oakley and McDonald. Dr. Robert Carothers of Cincinnati, a guest at the meeting, stated that the action of the Cleveland Academy would be helpful in developing similar policies throughout the state.

Attendance 105.

### COUNCIL MEETINGS

A special meeting of the Council of the Academy of Medicine was held March 23. The following members were present. Dr. R. H. Birge, in the Chair, Berkes, Brookhart, Chamberlin, Cummer, Dexter, Follansbee, Lenhart, Marine, Stone, Taylor and Thomas.

Dr. Follansbee reported on the available candidates for the office of executive secretary. Various men were discussed, and on motion of Dr. Cummer, a committee of three was appointed, consisting of the president, secretary and Dr. C.

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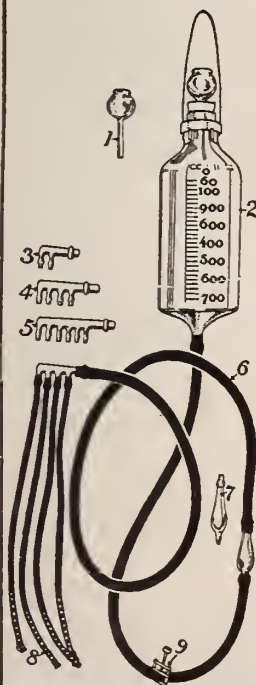
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L. McDonald, to investigate and interview the candidates and report to the Council at the earliest possible moment. It was moved and carried to authorize the incidental expenses necessary to reclassify the Academy Members, open a permanent office, and hire of stenographic assistance.

A request from Mrs. Dietrick for financial support in the upkeep of her car was disapproved, on the ground that such an expenditure did not come under the jurisdiction of the Academy.

A communication from Dr. Eddy of the Veterinary Section was discussed. It was adopted as the sense of the Council that a closer association with this Section was desirable.

\*\*\*\*\*  
 \* MEETINGS OF TOLEDO AND \*  
 \* LUCAS ACADEMY OF MEDICINE \*  
 \* \*\*\*\*\*  
 (N. W. Brown, M. D., Correspondent)

On February 6 the Academy of Medicine was addressed by W. J. Cassidy, Phm. B., of Detroit, on "Salient Points on Cranial Injuries; with and without Compression, Their Diagnosis and Treatment", presenting in a most interesting manner the observations made during a very large experience in cranial surgery. The conditions which he described were illustrated by numerous X-ray plates and lantern slides.

Dr. Cassidy divided the processes and symptoms of cranial injuries into: (1) those of mild compression in which the subjective signs are headache and nausea; (2) those with definite increased venous stasis in which there is a slight delirium, choked disc, and a slow pulse if the pressure is at the medulla; (3) those in which choked disc, cyanosis, stertorous respiration, high tension pulse and high blood pressure are the results; (4) head injuries in which there is a failure of arterial compensation with rapid pulse, dilation of the pupil, coma deepening and a falling blood pressure. Von Bergman and Altman state that the symptoms are due to recession of spinal fluid from between the arachnoid and the pia into the general ventricular cavity, removing the support given by the cerebro spinal fluid to the nerve centers of the base where the large vessels enter the brain.

On February 13, the Surgical Section presented the following program before the Academy of Medicine:

"Some of the Problems in Appendicitis," Dr. T. F. Heatley.

"Inguinal Hernia," Dr. L. F. Smead.

#### ABSTRACTS

DR. HEATLEY: The most logical working classification of inflamed appendices seems to be: (1) chronic; (2) sub-acute; (3) acute; (4) acute with perforation. Appendicitis may be a complication of pregnancy, typhus fever, tuberculosis, or

thrombosis of the mesenteric vessels. Floating kidney may simulate an appendicitis and according to Edebohls may cause a true appendicitis by pressure upon return of circulation of the appendix. Mucus colitis and ectopic pregnancy are conditions frequently simulating appendicitis. Complications are better avoided than treated. The formation of post-operative case should be prevented by due care in the operative technique. Vomiting should subside within the first twenty-four hours, if the pathology has been properly cured. Preoperative catharsis should be avoided until the proper diagnosis is established. The essayist reported a case in which he had operated on a boy, twelve years of age, for a post-operative appendiceal fistula.

DR. SMEAD: The cure of inguinal hernia fails too frequently because of the choice of the wrong type of operation, but more frequently because of careless or inaccurate attention to detail. The Bassini operation is most commonly used but transplantation of the cord is unnecessary in small inguinal hernias. Transplantation of the cord is absolutely necessary in direct inguinal hernias and success depends upon the firm, accurate closure of the inguinal canal from the internal ring to the pubic bone. Local anesthesia is of great value and kangaroo tendon is the best suture for the lower end of the canal. A high percentage of success will only come to the most intelligent and painstaking operator.

The meeting on February 20, was featured by a symposium on blood transfusion:

1—Compatibility Tests for Blood Transfusion, by Dr. S. S. Hindman; 2—Blood Transfusion as a Medical Problem, by Dr. H. G. Pamment; 3—Surgical Technique of Blood Transfusion, by Dr. F. M. Douglass.

The paper by Dr. Hindman included a description of the grouping of donors and recipients according to the accepted classification, and described the microscopic and macroscopic technique of "matching" blood.

Dr. Pamment read a most interesting paper on blood transfusion from the standpoint of the physician, laying special emphasis on its value in many strictly medical conditions and encouraging its more general use. He advocated the use of transfusion early in anemics and other pathological states.

Dr. Zbinden demonstrated the Unger method of direct blood transfusion and in his discussion of the subject presented the advantages of direct blood transfusion.

Dr. Douglass advocated the Kimpton-Brown technique and some personal modifications which he has employed. The discussion was opened by Dr. Patrick who gave his experience with both the Kimpton-Brown and the Citrate method. He expressed himself as being decidedly in favor of the latter method. Drs. Doherty, Salzman, Brown, Waggoner and others joined in the discussion.



# Hay Fever Time

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## COUNTY SOCIETIES

### SECOND DISTRICT

*Greene County* Medical Society was honored by a visit from former Executive Secretary George V. Sheridan, now publisher of *The Springfield Sun*, at its April 1 meeting. Mr. Sheridan addressed the society on "Compulsory State Health Insurance."

### THIRD DISTRICT

*Allen County* Medical Society met in regular bi-monthly session at Lima on March 16, with 18 members present. The paper of the evening, by Dr. A. S. Roebuck on "Blood Pressure Readings as Found in General Practice," was of unusual interest. Discussion was opened by Dr. W. H. Parent, followed by Drs. Tillotson, Rudy, Clark, Stueber, Bice, Yingling, Gamble. Dr. F. G. Stueber reported two cases of glioma retinae. Case 1. A child of 12 months. Mother first noticed the sheen or golden yellow pupil last winter. When seen, the eye was blind and tension +1. The globe was enucleated and specimen submitted to Dr. Rhomy of Fort Wayne, who pronounced it glioma. Case 2. Came under observation during the fall but unfavorable prognosis given no doubt caused patient to seek aid elsewhere. Later report that eye was removed by Toledo oculist. Dr. Rudy reported a case of measles followed by influenza, resulting in a case of pneumonia of the right wide, with a possible effusion of the plural sack.

The meeting of April 6 was held at St. Rita's Hospital, following medical and surgical clinics by the hospital staff throughout the day. Dr. Dean Lewis of Chicago, professor of surgery at Rush Medical College, addressed the society on "Some Problems in Traumatic Surgery." Attendance, 60.—A. S. Rudy, Correspondent.

### FOURTH DISTRICT

*Henry County* Medical Society held its annual election of officers on April 6, with the following result. President, Charles Mowery, Napoleon; vice-president, C. E. Burgett, McClure; secretary-treasurer, C. H. Skeen, Napoleon; delegate, R. C. Davis; alternate, Thomas Quinn, Napoleon.

### FIFTH DISTRICT

*Lake County* Medical Society held its 130th regular monthly session at Painesville Hospital, April 5. Nurses of the county and many of the laity were present at this meeting which was addressed by Dr. F. E. Bunts of Cleveland on the subject of "Cancer." He said, in part, that cancer is not infectious, nor is it hereditary, that the cause was due to some long, persistent irritation. He emphasized the importance of early

diagnosis and free and complete excision as sane treatment, and stated that pastes and ointments have no place in the treatment of this dreaded disease. Dr. Bunt's address was part of the program of the Committee on Control of Cancer of the State Association which has set aside the week of May 9 as "Cancer Week" during which members of the Lake County Society will address meetings in various parts of the county on this subject. A revised fee schedule was adopted by the society at its March meeting.—E. S. Jones, Secretary.

### SIXTH DISTRICT

*Columbiana County* Medical Society's meeting of April 9 was attended by 40 physicians from all parts of the county. Dr. C. H. Aufhammer of Pittsburgh gave a most interesting and instructive address on "Surgery of the Kidney", taking up in detail various methods of diagnosis and treatment. During Dr. Aufhammer's address an accident case with laceration of the kidney was brought in and operated by Dr. C. H. Bailey, the kidney being removed.—J. M. King, Secretary.

*Portage County* Medical Society met at the home of Dr. G. J. Waggoner in Ravenna on April 7. Dr. John Phillips of Cleveland being unable to fill his engagement to speak on "Heart Lesions and Their Prospects in Life," the society persuaded Dr. R. D. Worden, the new county health commissioner, to explain his plans for handling communicable diseases. The subject was thoroughly discussed and the society feels that the employment of a full-time health officer will prove very beneficial to residents of this county. Drs. S. U. Siron and E. H. Knowlton have been elected president and secretary-treasurer of the society.—E. H. Knowlton, Secretary.

*Summit County* Medical Society held its April meeting at the People's Hospital on the 6th, with 50 members present. Dr. U. D. Seidel showed a young patient with a growth on iris and pigment degeneration of same. Dr. John Phillips of Cleveland read an instructive paper upon "Spinal Syphilis" which brought forth much discussion and many questions. The secretary reminded members that Summit has not yet reached the one hundred per cent. goal in membership and requested delinquent members to pay promptly. Present indications are that Summit County will be well represented at Toledo.—U. D. Seidel, Secretary.

### SEVENTH DISTRICT

*Jefferson County*, in session at the Steubenville Y. M. C. A., April 13, heard an excellent paper by Dr. W. A. Quimby of Wheeling, West Virginia, on "The Co-existence of Gall-bladder and Appendiceal Infection." Clinical cases were presented by various members of the society.—J. R. Mossgrove, Secretary.



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## OHIO PUBLIC HEALTH NOTES

Congested housing is said to present a serious menace to public health in Cleveland, which recently suffered epidemics of scarlet fever, whooping cough and measles. Overcrowding in tenements is such that the "irreducible minimum" of one person to a room, established by the United States Department of Labor, is greatly exceeded, making quarantines difficult of enforcement and spread of communicable diseases easy. The city council has considered the placing of 5,000 tents in the parks as a temporary relief measure, but Health Officer Rockwood has called attention to the fact that these will be an added health menace unless running water and sewer facilities are furnished.

—A clinic for babies and children up to school age was opened in Delaware April 1 and is conducted on the first and third Thursdays of each month, under the direction of Dr. C. W. Chidester, health commissioner.

—A special effort will be made to save the lives of babies in Akron during the coming summer. Educating mothers in the care of infants, together with the supplying of free milk and ice by the city will be the chief plan of attack against the grim reaper. Branch clinics will be established in various sections of the city, where mothers will be advised and babies treated.

—Dr. A. H. Haworth of West Milton has been named full-time health commissioner for Miami County at a salary of \$3,500. His jurisdiction includes the entire county with the exception of Piqua and Troy, which have their independent health departments.

—More than 600 women received instructions in the first course of home nursing, which was completed April 8 under the auspices of the Canton health department. Lectures were given by Drs. C. A. LaMont, F. G. King, C. S. Hackett, C. E. Fraunfelder, C. E. Exline, C. E. Schilling, W. W. Scott, L. E. Leavenworth and F. M. Sayre.

—As part of the public health program adopted by the Mohawk-Brighton Social Unit, Cincinnati, a night dental clinic has been opened at the headquarters of the unit.

—Dr. C. G. Augustus resigned as health commissioner of Springfield April 5. It is probable that Dr. Rush R. Richeson of Yellow Springs, who was recently appointed county health commissioner, will succeed Dr. Augustus in the Springfield post and will thereafter be employed on a part-time basis to look after health work in the county outside of Springfield.

—A "dope" house in Akron, the mechanical mysteries of which are said to rival the descriptions of yellow-backed detective tales, was dis-



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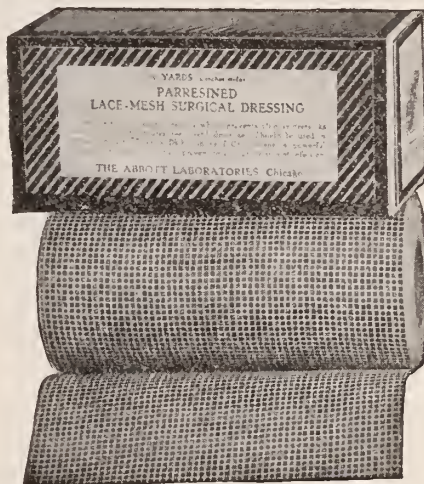
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closed when its alleged proprietor was arrested on an indictment returned by the federal grand jury in March. Evidence was found in the shape of capsules of cocaine and of morphine and an amount of opiates worth more than \$500.

—At a recent meeting of the Granville Red Cross Unit a campaign of education on the provisions of the Hughes health code was recommended.

—Creation of a Columbus sanitary district, embracing Columbus, contiguous territory and a number of villages within Franklin County, to secure better sewage facilities for the entire district, was urged before the city council, March 22, by a committee from the local Engineers' Club. The plan has the indorsement of Service Director Duffy and City Engineer Maetzel.

—Dr. Rollin D. Worden, formerly of Long Island, New York, has assumed his duties as Portage County health commissioner.

—A "health center" has been opened at Mt. Vernon Red Cross headquarters for the examination and treatment of children and other persons who have symptoms of tuberculosis. Dr. S. A. Douglass, superintendent of the State Tuberculosis Sanatorium, is conducting the clinics.

—Dr. W. Wylie Scott has resigned as Canton city physician after three years' service in that capacity.

—Plans for a permanent memorial for Summit County nurses who served with the American and allied armies, and requests to congress that the American Red Cross nurse be given a relative rank, were the principal topics of discussion at the annual meeting of the Summit County Nurses Association, March 23.

—Miss Alma Denny, a graduate of Miami Valley Hospital, Dayton, has been appointed to the position of Logan County health nurse and will work under the direction of Dr. W. H. Carey, county health commissioner.

—An epidemic of sleeping sickness assumed broad proportions in Canton in late March, when it was reported that three persons had died of the disease and it was estimated that there were 100 other cases.

—An examination of 16,000 Cincinnati school children disclosed 42 positive and 24 suspected cases of trachoma. Clinics for the treatment of these cases were conducted under the joint auspices of the United States Public Health Service, the State Department of Health and the local health department.

—A survey of the Boys' and Girls' Industrial Schools is being made under the direction of the State Board of Administration by Dr. S. A. Douglass, superintendent of the State Tuberculosis Sanatorium, to ascertain how many of the pupils at these institutions are affected with tuberculosis. It is estimated that there are at least 100 cases at the two schools which provide no facilities for their isolation.

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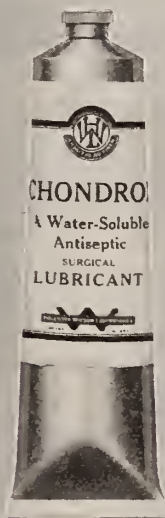
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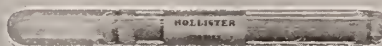
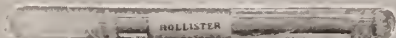
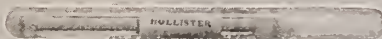
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## Council Devotes Quarterly Meeting to the Completion of State Meeting Plans

### MINUTES

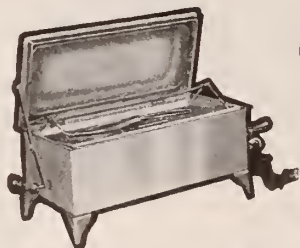
Council of The Ohio State Medical Association met Sunday, March 28, at the Hotel Deshler, Columbus. Members present: President J. F. Baldwin; President-elect Charles Lukens; Ex-president E. O. Smith; Treasurer H. M. Platter; Councilors March, Rardin, Updegraff, Hendershott, McClellan, Carothers and Teachnor, and Executive Secretary Martin. Reading of the minutes of the meeting of January 4 was dispensed with as they had been previously published in *The Journal*.

In a detailed consideration of the annual meeting program Dr. Teachnor called attention to the fact that by providing for the annual election of officers at the second session of the House of Delegates, it was evidently the intention to omit one session which it has been customary to hold in other years. At the suggestion of Dr. Baldwin it was decided to adjourn the morning session of the first day until evening if it was found impossible to complete the program in the morning, and to schedule the second meeting of the House of Delegates for the afternoon of the second day. The scientific program was carefully considered and after a few minor corrections Dr. Smith moved that it be adopted as corrected. Seconded by Dr. Hendershott, and carried.

Dr. Lukens and Executive Secretary Martin explained the situation on exhibit space, stating that through the refusal of the Y. M. C. A. officials to permit use of the entire lobby for that purpose, the number of booths would be reduced from 35 to 21. The tentative budget of expenses for the meeting was read by Dr. Teachnor, after which Council discussed means of reducing the expense to somewhat offset the deficit which will result from the lack of exhibit space.

After a consideration of the value of the scientific discussions, as reported by stenographers, Council decided, on motion by Dr. Teachnor, seconded and carried, to dispense with this procedure. It was suggested that discussants should submit their remarks in typewritten form to the section secretary within two weeks after the meeting, in order that it might be edited by the secretary and turned over to the medical editor. The business sessions of the House of Delegates will, of course, be reported by the Association stenographers as in the past.

Dr. Smith moved that a general session for a symposium on health insurance be substituted for the smoker on the evening of the first day. Seconded and carried. It was pointed out that this would provide opportunity for considering



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this important subject and at the same time practically eliminate the cost of the smoker.

Dr. Lukens reported on plans for the banquet and other arrangements and asked for definite instructions from Council in the matter of expenditures. On motion of Dr. Teachnor, seconded and carried, this matter was left to the discretion of the local committees, with the general instruction that expenses must be cut to conform to the income.

Executive Secretary Martin called attention to the fact that reports of the special and standing committees would be printed in the June issue of *The Journal*, and requested Councilors to send their reports to the Association headquarters within ten days in order that they might be published with the committee reports.

In the absence of Dr. Upham, chairman of the Committee on Public Policy and Legislation, Executive Secretary Martin read the report of the special committee on health insurance, which, on motion of Dr. Rardin, seconded and carried, was accepted, its recommendations adopted and ordered published.

Executive Secretary Martin also advised the Council concerning the distribution by Samuel McCune Lindsay, former president of the American Association for Labor Legislation, of a questionnaire on health insurance. This matter was

thoroughly discussed by Drs. Smith, McClellan, Carothers, Udegraff, Rardin, Lukens and Platter, it being the consensus of opinion that information on health insurance should be disseminated to the county societies through *The Journal* and by means of bulletins.

Executive Secretary Martin reported that through the efforts of a special committee of the State Association a revised fee schedule for the Industrial Commission had been formulated and would probably receive the indorsement of the Commission within a short time.

A report of the membership of the Association for 1920 showed a total enrollment of 4,218 paid members. Attention of Council was directed by Secretary Martin to a situation which had developed in one county which had remitted regular membership dues for a Roentgenologist who is not a physician. Citing Chapter XII, Section 4, of the Constitution and 'By-Laws, which requires active members of the Association to be "reputable and legally qualified physicians," the secretary was instructed to return the remittance referred to.

A brief report was submitted on medical defense, which called attention to the fact that three suits and four threatened suits had been referred to the Association since January 2. This number is larger than any number reported in a

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similar period since the defense plan has been in operation.

Dr. Platter presented the annual report of the treasurer and stated that it would be published in the June issue of *The Journal*. He also announced that the Association auditor had completed his inspection of the treasurer's books.

Having received from the medical editor of *The Journal*, an inquiry concerning the action of Council in the matter of increasing his salary, which was considered at the October meeting of Council and laid on the table, Dr. Teachnor asked the wishes of Council regarding this matter at the present time. It was the consensus of opinion that no salary increases should be authorized at this time, and that the matter should not be taken from the table.

Dr. Baldwin read a letter from Frank Cain of the National Pharmaceutical Association, advocating the establishment of a pharmaceutical department in the Army and requesting indorsement of the State Association for the project. After discussion it was informally decided that the Association should take no action in this matter.

On motion duly seconded, Council adjourned to meet Monday, May 31, at 7:30 p. m., in Toledo, the place to be determined later.

Wells Teachnor, M. D., Secretary.

#### Small Advertisements of Interest

*Wanted*—The Van Houten and Ten Broeck Static Machine with sixteen or more plates. Dr. K. G. Cieslak, 2297 W. 14th St., Cleveland, Ohio.

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*For Sale*—Modern office and residence combined, good roads, town of 1,100 inhabitants in northwestern Ohio, three railroads, churches and first-grade high school, practice \$8,000. Address M., care *The Journal*.

*For Sale*—Complete office equipment of the late Dr. Fred C. Hunt at Girard, Ohio, a rapidly growing town of 8,000 inhabitants. Practice has been established 22 years and has been very successful. Equipment can be seen at Pugh Block, Girard, or detailed information obtained from C. W. Hunt, Executor, Buick Building, 1903 E. 19th St., Cleveland.

*Opening for Physician*—Good location for physician. Rich farming section. Office and house for sale. Address Dr. H. Dickson, Urbana, Ohio.

*Available Location*—The village of Green Camp, Marion County, needs a physician. The former resident has moved away and Green Camp, with a population of 325, and the surrounding country are six miles distant from the nearest medical assistance. Address E. M. Matthews, Green Camp.

*Wanted*—Assistant physician at the Ohio Hospital for Epileptics, Gallipolis, Ohio. Single man preferred. Salary \$1,320 to \$1,800 per year and maintenance. Apply to G. G. Kineon, M. D., Superintendent.

*Location*—Clark County Red Cross advises that a village of 250, with a substantial rural community surrounding, in its district needs a physician. Now depends on Springfield physicians, 10 miles distant. Address Mr. J. D. Baker, Enon.

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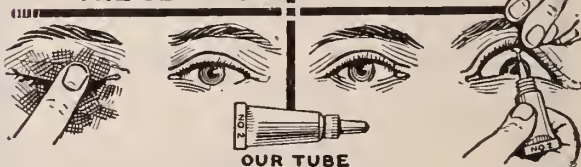
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### Encourages Venereal Disease Clinics

Mr. W. D. Riley, Assistant Educational Director of the United States Public Health Service, is conducting a survey of Ohio cities with a population of 15,000 or more, relative to facilities in the various cities for the treatment and control of venereal diseases.

The survey began in Ohio some weeks ago and is a part of the general survey being conducted over the whole nation to determine the need of the cities and advise concerning equipment to be used in such clinics. Preparatory to the survey the director first interests the heads of the various clubs, medical organizations and Red Cross chapters; with their help he takes up the question of such control and help as is necessary. The survey is not planned to criticize the work of any one city or clinic but to suggest remediable ways of improvement for the clinics already established and to assist in organizing new ones.

Cooperation has come from police departments, from health boards and probation officers in the various cities and in many where no disease ordinances have been made, rules and regulations by the city councils will probably be passed.

During the month of February, meetings were held at Columbus, Newark, Mansfield, Marion, Lima, Toledo, Sandusky, Lorain, Elyria and Lakewood. At Lorain it was found that a clinic had been discontinued in that city but was necessary and will be re-established. Much interest was shown in the other cities and movements were begun for treatment in Newark, Mansfield, Marion, Sandusky, Elyria and Lakewood.

In March such meetings were held at Cleveland, Ashtabula, Youngstown, Akron, Massillon, Canton, Alliance, East Liverpool and Steubenville. During that month, Massillon and East Liverpool planned to establish a clinic. In April Mr. Riley spoke at Zanesville, Lancaster, Chilli-cothe, Portsmouth, Springfield, Dayton, Middletown, Hamilton, Cincinnati and Norwood. All of the cities of this group except Zanesville, Norwood and Middletown have clinics and Lancaster has planned to establish one.

### New and Nonofficial Remedies

The following articles were accepted in March by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies.

Abbott Laboratories: Elixir Barbital Sodium.

Antoine Chiris Company: Barbital-Chiris; Barbitol Sodium-Chiris.

Gilliland Laboratories: Schick Test (Gilliland).

Hollister-Wilson Laboratories: Ampoules Corpora Lutea Soluble; Extract-Hollister-Wilson; Ovarian Residue-Hollister-Wilson.

Vitalait Laboratory of California: Condensed Vitalait.

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0.2	-	-	-	-	-	.80
0.1	-	-	-	-	-	.50

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-	0.9	-	-	-	-	\$1.75
-	0.75	-	-	-	-	1.60
-	0.6	-	-	-	-	1.35
-	0.45	-	-	-	-	1.20
-	0.3	-	-	-	-	1.05
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On orders of 10 tubes						- 10% discount
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## Formation of Ohio Public Health Association is Proposed by Anti-Tuberculosis Society

Now that Ohio has a well organized state health department and is rapidly securing effective working organizations in the local communities, the need of increased assistance in the development of public health movements in the state by voluntary organizations is said to have become apparent. To meet this need the Ohio Society for Prevention of Tuberculosis has evolved a plan which will be submitted to the executive committee of the society for approval at the annual meeting to be held in Columbus on May 13.

It is recognized that in any public health movement there are two main and distinct sources of energy—the official and the voluntary organizations. The official consists of the laws, rules and regulations, the boards of health, health commissioners and other paid personnel. The field of work open to official organizations is well defined by the laws and rules and regulations which prescribe their duties and responsibilities. The voluntary organizations usually exist to carry on educational campaigns in particular phases, but their work can be viewed as embracing everything outside of that occupied by the official organization.

The plan proposed by the Ohio Society for the Prevention of Tuberculosis would realign in a comprehensive organization, probably to be known as the Ohio Public Health Association, the voluntary state and local health organizations in such a manner as to make them supplementary to the state and local official health machinery. The organization so grouped would include (1) those organized on a professional basis, comprising the Ohio State Medical Association, Ohio State Dental Society, Ohio State Pharmaceutical Association, Ohio State Association of Graduate Nurses, Ohio Veterinary Medical Association, Ohio Eclectic Medical Association and the Ohio Hospital Association; and (2) those organized on a propaganda basis, such as the Ohio Society for the Prevention of Tuberculosis, the Red Cross Chapters which are undertaking public health work as a peace-time program, and the Women's Councils of the State Council for National Defense.

In their field of supplementary effort the effectiveness of the voluntary organizations will be increased, it is declared, if they follow insofar as possible the lines laid down in the organization of the official organization. Their functions are

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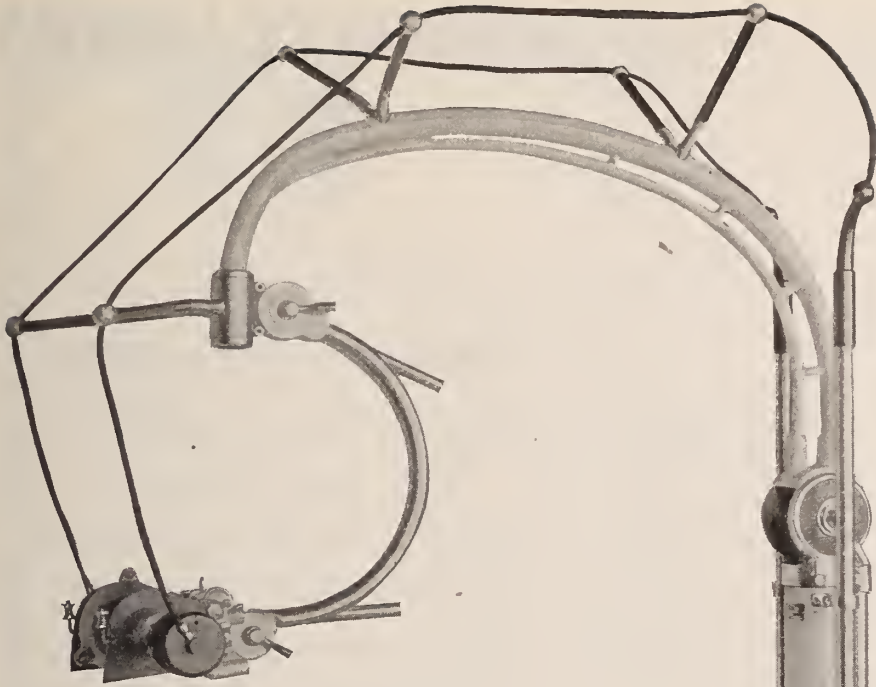


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to initiate, experiment, establish and prove methods and means for meeting the various public health problems and then pass them over to the official health organization. It is pointed out that the weakness in local voluntary health organizations has been their inability to so shape their program as to be able to transfer their established work to the official organization. Various reasons for this failure are given but they are all placed under one of two main heads: either the official local organization is inefficient and cannot be trusted to carry on the work; or the voluntary local organization comes to view itself as a necessary agency in carrying on the established health work. The real function of voluntary local organizations is to make possible the efficiency and extension of the official local organization in order to be able to shift the burden of routine health administration to it.

The state official organization in Ohio, namely the state department of health, has been strengthened and its program enlarged through increasing its personnel and additional appropriations from the legislature. The local official organizations are now in process of being strengthened by similar methods. There should be no difficulty, therefore, in transferring health work initiated by the voluntary organizations to the official agencies when the proper times arrives, the proposal says.

Under the state-wide Public Health Association suggested by the Ohio Society for the Prevention of Tuberculosis, it is proposed to organize, by a uniform scheme, a county public health league in every general health district. All such leagues would be grouped into district conferences. The present eight inspection districts adopted by the State Department of Health would be adopted for the district conference boundaries. The eight district conferences would elect annually three representatives to serve on the board of directors of the state organization. Each district conference would have sections for organizations, for health commissioners, for public health nurses, for laboratory, for dispensary and for hospital workers. Section meetings would be held from two to four times each year while the district conference would meet as a whole at least once each year.

The present organization of the Ohio Society for the Prevention of Tuberculosis, with the necessary alterations in its policy to broaden the scope of work, would be used as a nucleus for the new state organization, according to the plan. An important part of the program of all the local leagues would be to continue the fight against tuberculosis, and it is believed the work could be financed entirely through the sale of Christmas Seals in the same manner as the tuberculosis work is now financed.

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## NEWS NOTES OF OHIO

**Toledo**—Dr. Willard J. Stone, formerly of this city, has been appointed to a teaching position in clinical medicine at the University of South California and is on the staff of the Los Angeles County Hospital.

**Middletown**—Dr. E. O. Bauer has been appointed local examiner and physician for the War Risk Insurance Bureau by the United States Public Health Service.

**Hallsville**—Dr. R. Dudley Robinson has moved from this village to Toledo, where he has opened offices in the Nicholas Building for the practice of radium therapy.

**Hillsboro**—Drs. R. J. Jones and J. B. Glenn recently spent ten days in Rochester, Minnesota, at the Mayo Clinic, the former devoting special attention to surgery and the latter to X-ray work.

**Dayton**—Mrs. Louise R. King, wife of Dr. C. W. King, died at her home here March 22.

**Amherst**—Dr. W. T. Gatchell, a former practitioner at Ravenna, has located here.

**Toledo**—Dr. Walter H. Hartung, Lucas County coroner, is recovering from the effects of an operation which he underwent in late March.

**Sidney**—Dr. A. W. Hobby has returned to his home here after seven months' post-graduate work in Chicago.

**Kenton**—Dr. A. S. McKittrick was the recent donor of an X-ray machine to the biology and physics department of Ohio Northern University, of which he is an alumnus and trustee.

**London**—Dr. John W. Parker, for many years a practicing physician in this city, has accepted a position in the hospital of the Goodyear Rubber Company, Akron, and has taken up residence in that city.

**McConnelsville**—Dr. Donald G. Ralston, recently discharged from military service, has become associated in practice with Dr. J. F. Leeper of this city.

**Cincinnati**—Radium valued at \$1,200 was reported missing from the offices of Dr. Elmore B. Tauber, March 26.

**Xenia**—Dr. G. W. Wood of Wilmington has been appointed resident physician at the Ohio Soldiers' and Sailors' Orphans Home, succeeding the late Dr. Warren C. Hewitt.

**Canton**—En route to the meeting of the American Medical Association in New Orleans, Dr. A. B. Walker spent a pleasant vacation at San Diego, California.

**West Mansfield**—Dr. W. T. Sullivan has moved from this city to Kelley's Island. Dr. Sullivan's local office has been taken by Dr. W. C. Davis of East Liberty.

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and Other

## Ovarian Dysfunctions

Have Been Reported

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We offer the professional services of these gentlemen to medical men. Any questions along the lines of their endeavor will be gladly answered. In addition to the research work, which is being carried on in various branches of science, our staff is abundantly able to give physicians practical suggestions in all that relates to lues and its treatment.

Correspondence with physicians is invited and will be welcome as we are anxious to demonstrate our desire to cooperate with them in every possible way.

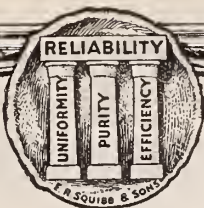
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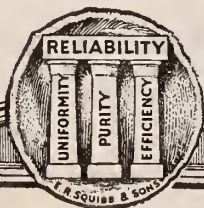
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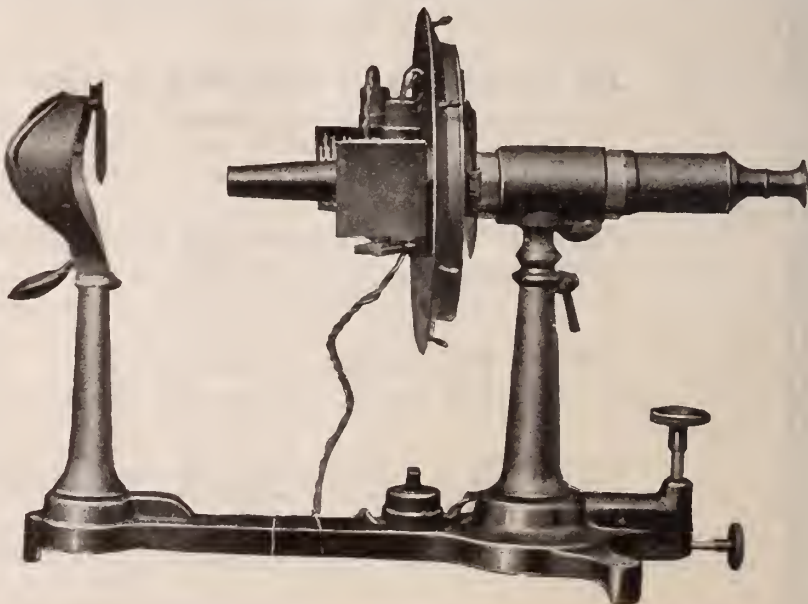
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# Ohio State Medical Journal

Published monthly by

THE OHIO STATE MEDICAL ASSOCIATION  
181 East State Street, Columbus, Ohio  
Telephones: Ohio State 4905; Bell Main 5259

This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.

Issued under the direction of the Publication Committee.

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**Next Meeting of the State Association,  
Toledo, 1920**

## EDITORIAL COMMENT

by D. K. M.

### All Aboard for Toledo

This is the last call for the Seventy-Fourth Annual Meeting of the Ohio State Medical Association in Toledo, Tuesday, Wednesday and Thursday, June 1, 2, and 3.

If you have not already planned to attend and can at this, the last moment, make arrangements, do not hesitate but wire for hotel reservations. (A schedule of hotel rates having been published in the April issue.)

While the "meat of the meeting" will be found in excellent scientific programs, there will be sufficient diversion in merry-making and entertainment. Only once a year does the opportunity come for the medical profession of Ohio to get together to discuss mutual problems and to make concerted plans for the coming year. This is the time for the annual inventory in scientific and organization achievement; for a discussion of improvement in methods and of greater service to the individual, the profession and humanity.

The coming months will multiply difficulties in the adjustment to changing conditions. Grave social and economic problems are impending. Of particular interest in this connection will be the general session on the first evening of the convention, June 1, devoted to problems of state medicine, particularly the proposal of compulsory state health insurance. Every Ohio physician can benefit by hearing Dr. Frederick R. Green, secretary of the Council on Health and Public Instruction, of the American Medical Association, and Dr. Walter H. Snyder, of Toledo, who will lead in the presentation of the subject.

Numerous other sessions of scientific importance will be interspersed by the annual banquet, the "play function" held on Wednesday evening, June 2. To refresh your interest, refer to the detailed program published in the May *Journal*. Then pack your kit and come.

### The New Industrial Fee Schedule

The special committee of the State Association appointed by Dr. J. F. Baldwin, president, some time ago, is pleased to be able to announce in this issue the adoption by the State Industrial Commission of a substantially increased medical and surgical fee schedule under the Workmen's Compensation law.

Reference to the activity of this committee has

been made in recent issues of *The Journal* and it is especially gratifying to the committee that the schedule as recommended by the committee in conference with Dr. T. R. Fletcher, chief medical examiner of the Industrial Commission, was adopted by the Commission with only minor modifications in details, and no reductions in charges for operation or treatment.

The new schedule which becomes effective June 1 is published in full together with introductory material on page 433 of this *Journal*, and it is the hope of the Commission and of the State Association's special committee that the new schedule will meet with the approval of the profession.

In the adoption of the new schedule the Industrial Commission recognized that efficient medical service is the foundation for the success of the Workmen's Compensation Act and that to secure such medical and surgical service, fair remuneration must be provided to the physician. It was further recognized that indemnity charges for loss of wage occasioned by industrial injury would be lessened in proportion to the improvement in medical attention.

It will of course be readily seen that the fee schedule is not and cannot be as high as charges made in some cases in private practice, but that the average for entire services throughout the state, based on charges to patients in moderate circumstances should form the basis. Special attention is called to the "flat rate" basis used in computing remuneration.

There have been and still are physicians in Ohio opposed to the principles of Workmen's Compensation. The law in Ohio, however, has been in effect for a number of years and it is uniformly conceded that Ohio's Workmen's Compensation Act is better and fairer in general operation than that in most of the other states. The policy of the State Association toward the law has been that since it is in operation and that if it is to be effective, the medical profession should be interested in having it properly administered.

Those who with reason and logic strongly oppose the enactment of compulsory state health insurance do not find in the Workmen's Compensation Law applicable to industrial accidents properly chargeable to industry, any such serious menace to professional integrity as might result from health insurance. It is even conceded by many that the Workmen's Compensation Law when properly administered constitutes an effective argument against the presumed necessity of state health insurance.

It is believed that by the adoption of the new schedule by the Industrial Commission many of the just complaints previously made by physicians will be eliminated and that such adoption is an achievement in practical benefits to Ohio's medical profession made possible through efficient organization.

### A Glance Back and a Look Ahead.

This issue of *The Journal* is devoted largely to the annual reports of the standing and special committees of the Association. Please do not get the impression that these reports are merely "space fillers", or that they are presented merely to conform to constitutional requirements. In the reports this year you not only find a concise review of Association endeavor during the past year, but a presentation of future problems and numerous suggested solutions. This is particularly true of the report of the Committee on Public Policy and Legislation, the activities of which are not only of vital but of increasing importance to each member of the profession.

As a summary of endeavor in other phases of organization activity, the other committee reports are equally important. You will be interested in the report of the Committee on Medical Defense; Committee on Medical Education; General Secretaries Committee, Committee on Auditing and Appropriations, Committee on Control of Cancer, Committee on Sociology, Committee on Hospital Standardization, and of course, the Publication Committee.

### Eddyites Want Sick Benefits

One's religious tolerance must be fixed in a peculiarly solemn setting if it resists a chuckle over the embarrassment that has befallen the Christian Scientists belonging to the teaching force of the New York City public school system. The regulations of the city board of education provide that a teacher absent from duty will not be "docked" of pay if she turns in a certificate from her physicians that she was too ill to work. Now, strangely enough, the Christian Scientists on the staff want the benefit of that rule; although "Science and Health" teaches them to deny that there is any such thing as sickness in the world, yet it is far more agreeable, when pay day looms ahead, to deny the denial than to contemplate the loss of needed cash.

But the grave difficulty comes over that required certificate of a physician; the only physician known to loyal disciples of Mother Eddy is the Christian Science healer. Will, then, the board take a healer's certificate that on such and such a day an absent teacher was ill? No, says the board, it will not. If the healer is consistent, all he can certify is that the teacher had an error of mortal mind. And the board of education of the august city of New York says that if it knows itself — and it thinks it does — there is no good New York money going to be paid out to encourage errors of mortal mind. Let the Christian Scientist engage "absent treatment" and stay in her school-



room. The strange doctrine of Mrs. Eddy has led her followers into a good many ridiculous and abashing situations, but none more ludicrous, we judge, than this spectacle of so intelligent a company of the faithful industriously whipping the devil round the proverbial stump in order to obtain sick benefits for maladies and infirmities which they constantly declare not to exist—Editorial in *The Continent*, Chicago.

#### A Questionable Policy

No sooner had the War Risk Insurance Bureau been fairly well organized than steps were taken by governmental functionaries to minimize the fees and salaries paid to some physicians rendering service in this work. It should not be difficult to see, if such a policy is continued, whether it will drive out of the service the best equipped physicians, or compel them to make unnecessary sacrifices.

With millions of dollars to be spent in rehabilitating disabled soldiers and sailors, and in the payment of pensions within the next few years, the government should be able to see that efficient medical service properly recognized and fairly compensated would save much suffering, much loss of time, and minimize much permanent disability.

Under the heading of "Muzzling the Ox" a recent editorial in the *New York Medical Journal* pointed out the dangers of a penurious policy in dealing with medical officers still in military or naval service.

This editorial, applicable both to the situation of physicians in military service and those who render governmental service in a civilian capacity, concluded with the following remarks:

"The surgeon generals of the Army, the Navy, and the Public Health Service report that resignations are taking place at an alarming rate, and that it has proved impossible to secure medical men of proper age and professional qualifications to fill the vacancies so created. The rewards of civil practice are so much greater than those of governmental service that it has only been with extreme difficulty that reserve officers have been secured in sufficient numbers to meet existing requirements. While this situation as it affects the Army and the Navy is less serious at the present time, it is one of pressing urgency to the Public Health Service, upon which devolves the very important task of furnishing the medical and surgical relief to those men and women who suffered injury or contracted disease during the Great War.

"The medical services then are confronted with the alternative of lowering their standards, and efficiency, or rendering inadequate service by reason of scarcity of medical personnel. It is to be hoped that Congress will see the futility of muzzling the ox when he treads the corn, that it will recognize that the older men in the service have been deprived of their ability to readily readjust themselves in civil life by reason of their government service, and that the pursuance of a niggardly policy will undoubtedly undermine the foundation upon which rests the health of the combatant forces of the government and of the civilian population as well."

#### Obstetrics and Pediatrics Program

As announced in the May number of *The Journal*, the program for the Section on Obstetrics and Pediatrics was not available for publication with the rest of the State Meeting program in that issue because of the illness of Dr. Harold J. Morgan, the section secretary. Through diligent work on the part of Dr. John Gardiner, the chairman, and Dr. Morgan, now convalescent, a program for Toledo sessions of the Section on Obstetrics and Pediatrics has been completed which meets the usual high standard of that section. It is herewith presented.

#### Tuesday, June 1, 2:00 P. M.

1. "How We Attempt to Do Scientific Obstetrics in General Practice"—by A. A. Brindley, M. D., Port Clinton.
2. "Observations on the Treatment of One Hundred Cases of Eclampsia"—by W. D. Inglis, M. D., Columbus.
3. "Resume—Treatment of Eclampsia"—by Magnus A. Tate, M. D., Cincinnati.
4. "Infant Feeding. Two Useful Additions to Our Armamentarium. Experiences in the Use of Lactic Acid Milk and Heavy Cereal Gruels"—by H. J. Morgan, M. D., Toledo.
5. "The Unrepaired Perineum"—by J. O. Howells, M. D., Bridgeport.
6. "Placenta Previa with Report of Five Cases"—Wm. F. Dager, M. D., Lorain.

#### Wednesday, June 2, 9:00 A. M.

7. "A Plea for Better Obstetrics"—by L. R. Fast, M. D., Paulding.
8. "Endocarditis in the Puerperium" by Andrews Rogers, M. D., Columbus.
9. "Anesthesia in Obstetrics" by Arthur H. Bill, M. D., Cleveland.
10. "Care of the Pregnant Woman" by W. D. Fullerton, M. D., Cleveland.
11. "The Diagnosis of Extrauterine Pregnancy before Rupture"—by W. G. Dice, M. D., Toledo.
12. "The Present Day Nursing Problem in Obstetric Practice"—by S. J. Goodman, M. D., Columbus.

A clever bit of sarcasm on the supposed efficacy of a well-known patent medicine is found in the following paragraph editorial by "Bob" Ryder in *The Ohio State Journal*:

"Our scholarly friend of The Liberty Press, a great delver into the mysteries of antiquity, has satisfied himself by further historical research that old Sarah took Mrs. Lydia E. Pinkham's Vegetable Compound regularly before little Isaac was born but it still remains unexplained how Cain and Abel, especially Cain happened to be so healthy and vigorous."

# The Surgery of Peripheral Nerves\*

John A. Caldwell, M. D., F. A. C. S., Cincinnati

**Editor's Note.**—In view of the fact that, according to Tinel, about 18 to 20 per cent of all wounds of the extremities had peripheral nerve lesions, it is not surprising that the Neurologic Service found the treatment of such conditions one of its larger problems during the war. The number of cases available for study has added much information to the diagnosis of peripheral nerve injuries, their symptomatology, classification, and treatment. While primary suture is the ideal surgical procedure for anatomic division it is occasionally advisable to await spontaneous improvement in case there is any doubt that the lesion may be only a physiologic one and secondary suture becomes necessary. Dr. Caldwell notes that physiologic lesions show a greater degree of muscular atrophy than cases of actual nerve division, in which adjacent nerves seem vicariously to assume some of the function of the injured nerve. The studies in nerve regeneration have demonstrated that in end-to-end suture all neuromata must be resected and unfibrosed nerve must be sutured to unfibrosed nerve. Nerve grafting has not had sufficient trial to justify conclusions and since it always involves partial sacrifice of a completely functioning nerve it should never be used as a method of election against suture or transplantation.

**THE STUDY** of peripheral nerves, their function, behavior after injury, methods of their repair and their regeneration has assumed great importance on account of the great number of cases occurring in the World War, and a vast amount of literature on the subject has accumulated.

The early British and French reports indicated that about 4 per cent. of all wounded had some gross peripheral nerve lesion, but later data disclosed that in the treatment of more obvious injuries many lesions of peripheral nerves had been overlooked. Since these lesions occurred nearly always in the extremities in which splinting was part of their proper care and they were under the observation of the general surgeon it often happened that the nerve lesion was not discovered until the patient had been evacuated for convalescence.

## PERIPHERAL NERVE INJURIES IN THE A. E. F.

The first reports from the chief surgeon of the A. E. F. gave peripheral nerve injuries in six per cent. of all casualties. In October, 1918, Colonel Salmon, consulting neurologist of the A. E. F., ordered a survey of all wounds of the extremities by neurologists and this raised the percentage considerably.

Tinel's statistics stated that 18 to 20 per cent. of all wounds of extremities had peripheral nerve lesions.

It was my fortune to be assigned to duty at United States Army General Hospital No. 28, at Fort Sheridan, Illinois, last February, on the peripheral nerve service under Lieutenant-Colonel Dean Lewis. There at the close of my service in May we had 346 cases. An analysis of the first 97 cases was as follows:

Brachial plexus .....	5
Median .....	12
Radial or Musculo Spiral.....	19
Ulnar .....	24
Musculo cutaneous .....	1

Sciatic .....	19
Anterior crural .....	1
Internal popliteal .....	2
External popliteal .....	15
Posterior tibial .....	2
Hypoglossal .....	1

Total .....101

Four cases had lesions of more than one nerve. The 249 cases subsequently were distributed in approximately the same proportion.

## TYPES OF NERVE LESION

A war injury of a nerve may cause one or more types of lesion. (1) It may cause *anatomic division* which may be *complete* or *partial*. (2) It may *contuse the nerve* or *cause concussion* of it or may cause it to be *compressed by a fragment of bone or missile*. In case of concussion or compression the axis cylinders are not destroyed but are rendered temporarily incapable of conduction but this function will return in time after the removal of the cause. A nerve so injured is said to be *physiologically divided*. Such division may be late or secondary as when a nerve is compressed by callus or is incarcerated in scar.

It will be apparent that the two forms of division may be combined, in fact are frequently combined. When a nerve is notched by a missile it would be expected that hemorrhage and oedema would take place into the remainder of the nerve and consequently conduction would be totally abolished, or what was observed in many cases, lesions received where several nerves are grouped, as in the brachial plexus or in the upper arm would sever one trunk and merely bruise the adjacent trunks. In such cases there would be complete immediate paralysis of the entire member followed by partial recovery.

## PRIMARY OR SECONDARY SUTURE

*It is impossible to determine at early examination if a division is anatomic or physiologic without direct exploration, and since this is a procedure without hazard it is justifiable if the case*

\*Read before the Cincinnati Academy of Medicine, November 10, 1919.



is seen early and it is likely that the wound is clean or can be rendered aseptic. Primary suture is the ideal course under the above conditions, but when such conditions do not prevail and there is doubt as to whether the division is anatomic or is only physiologic it is best to keep the case under observation for at least six weeks before secondary suture is attempted. After this period many cases which at first showed no conduction will show sufficient spontaneous improvement to justify non-interference.

#### EARLY SYMPTOMS

The early symptoms of a nerve lesion are loss of conduction of nerve impulses. It is only when the failure to conduct remains after some period and secondary changes are seen in the parts supplied by the nerve that it can be said that the lesion will not spontaneously resolve.

In the cases seen at Fort Sheridan, at least three months had elapsed since injury, consequently the test of time was not a factor in diagnosing the type of lesion. The symptoms by which the character and location of lesion was determined were:

1. Motor paralyses.
2. Sensory paralyses. Epicritic, Protopathic and Deep.
3. Attitude and contractures.
4. Muscular atrophy.
5. Reaction of degeneration.
6. Trophic and vaso-motor disturbances.
7. Symptoms of irritation.

1. Motor paralysis may be complete or partial and is always of the flaccid type. When it is allowed to continue untreated by proper splinting and massage and electro-therapy it always results in attitudes and contractures which are more or less characteristic for the particular nerve involved.

2. Sensory paralysis appears immediately after injury, but its return is the first symptom noted, deep sensation appearing first, followed by protopathic sensation, while epicritic sensation is always delayed and makes its appearance about the same time as the return of voluntary control.

3. Muscular atrophy begins in about ten days and the degree varies with the type and duration of the lesion.

4. Reaction of degeneration can be elicited in about ten days after injury. The muscle reacts sluggishly and with worm-like contractions to the galvanic current and not at all to the faradic.

5. Vaso-motor and trophic disturbances. Many varieties of these phenomena may be seen in a large service. The skin may be dry and scaly or may be smooth and glossy. It may be deeply cyanosed and cold and clammy or may be a vivid red and warmer than the rest of the skin. Vesicles or ulcers may form or slight trauma may cause stubbornly healing ulcers. The nails may

be deformed, may be dry and brittle and cracked and may be ridged. Hypertrichosis is common.

Bone and joint changes may be seen as a result of altered trophic influence of the nerve supply. It may also come from relaxation of the capsule and muscles bridging the joint and from lack of sensory perception of trauma.

The subcutaneous tissue may become thickened and fibrosed and fibrosis of the muscles may be seen particularly in untreated cases.

Hyperidrosis—excessive sweating—is a common accompaniment of irritative lesions.

6. Symptoms of irritation. These are practically all sensory and in their mildest form are manifested by tingling and formication and in their severest form by intractable neuralgias with pains described as burning or tearing. The pains may be brought on by local or even distant irritation.

#### CAUSALGIA

Weir Mitchell, in his classic studies of peripheral nerve injuries after the Civil War, (which so far nothing in this war has equaled), described a condition to which he gave the name *causalgia*. It is seen most frequently affecting the median and sciatic nerves and later study has not removed it from the realm of speculation. It is characterized by intense burning pain in the distribution of the nerve, by glossiness and redness of the skin and profuse sweating of the territory supplied by the injured nerve. Gentle stroking or even blowing on the part will bring on the painful paroxysm or it may be brought on by fright, startling, or depressing emotions. Cold, moist applications give most relief and heat invariably aggravates it. Weir Mitchell says, "I have never seen a patient who once having experienced the relief from cold, moist dressings was willing to exchange it for any other form of treatment when a paroxysm siezes them." All patients that saw insisted on this treatment. In cases in which causalgia is a symptom the nerve is usually found on operation to be imbedded in tissue to be due to involvement of the arterial symptoms. Athanassio-Benissty considers the condition to be due to involvement of the arterial sympathetic fibres and Lariche has practiced stripping the brachial artery with some success.

#### CLASSIFICATION OF CASES AT FT. SHERIDAN

When patients were received at Fort Sheridan a very thorough neurologic examination was made, which consisted in plotting out the motor and sensory areas of paralysis and dynamometric tests of all affected muscles. Electrical reactions were taken of all muscles in the part and control reactions were made in the corresponding muscles of the opposite member. The cases were then grouped in one of three classes.

1. Cases which would require operation.
2. Cases which would not require operation.

3. Cases which might require operation, but it was not then positively indicated.

Our analysis of the first 97 cases showed that 31 fell in the first class; 24 in the second class, and 42 in the third class.

All cases were splinted to prevent contractures and deformity, and massage and electro-therapy were immediately instituted.

The thorough examinations, in wholesale quantities, gave an opportunity for clinical research in nerve function which has seldom if ever been equaled and has already pointed out several new problems in peripheral nerve physiology. I will briefly mention two of these.

*It was noted early by three of us that those cases in which interruption was physiological—especially the cases of scar incarceration—showed a greater degree of muscular atrophy than those in which the nerve was completely severed. This phenomenon has not been explained but it was of such common observation that I think there can be no doubt of the fact.*

*When a nerve is injured it was found that the adjacent nerves vicariously assume some of the function of the injured nerve. This was shown in this manner. Observation and history would show that after a nerve had been injured some improvement had taken place, but that the return of function had finally become stationary. Operation would be made and the nerve would be found so completely fibrosed that resection of the neuroma and end to end suture would offer the best chance of restoring function. This would be done and in a few days when the case would be examined it would be found that the same amount of function remained as before operation and not complete motor and sensory paralysis as would be expected after severance. Undoubtedly much of the assumed improvement after nerve injury has been due to this vicarious assumption of function by adjacent nerves.*

#### PHYSIO-PATHOLOGICAL CONSIDERATIONS

Before discussing operative procedures a short account of what takes place after injury to a nerve may make the rationale of the different methods clearer.

When a nerve fibre is separated from its parent cell the so-called Wallerian degeneration follows. The axis cylinders break up, myelin disappears and the cells of the sheath of Schwann proliferate. The nerve fibre is converted into a thickened neurilemmal sheath waiting to receive regenerating axis cylinders. It has been conclusively shown that regeneration takes place only from the proximal end and if the gap is not too great the new fibres grow down the old sheath guided by the cells of Schwann. If the gap is too great or scar tissue is interposed between the ends the fibres in their attempts to grow down become interwoven and matted into a tangled mass bound together with scar tissue. This mass, found on the proximal end, is the neuroma. On

the distal end is seen a rounded less bulbous swelling consisting of sheaths of Schwann and scar tissue. This is the pseudo-neuroma or glioma.

When a nerve is injured without severance a fusiform swelling is seen at the site of injury some weeks later, which consists of regenerating fibrillae in scar tissue and such a lesion may cause a complete or more or less incomplete barrier to regeneration depending on the degree of fibrosis present.

*The studies in nerve regeneration have demonstrated one sine qua non for success after operation. In end to end suture all neuromata must be resected and unfibrosed nerve must be sutured to unfibrosed nerve.*

#### OPERATIVE PROCEDURE

The operations on peripheral nerves fall into one of three classes.

1. Freeing of nerve from scar, or neurolysis—a term coined by Weir Mitchell.
2. End to end suture.
3. Bridging of defects after resection of nerves.

1. *Neurolysis.* There is nothing unique about this operation but one rather obvious course to pursue might be emphasized. The incision should be made down to normal nerve tissue above and below the lesion and the dissection should be made in both directions toward the lesion. It is most difficult to cut into scar tissue and isolate a nerve and the imbedded nerve can very easily be cut in two before it is recognized. This rule in technique of course applies to any nerve operation. After the nerve is freed it may be surrounded by a layer of fat or may be imbedded in an entirely different muscular or fascial layer.

2. *End to End Suture.* In this operation the nerve is freed from scar and the neuroma and pseudo-neuroma are resected until healthy nerve fibres are seen herniating through the cut section. Fine sutures of chromic gut or silk—usually four in number—are then passed about one-third of the way through the nerve, and are tied down without making great tension on them. Mattress sutures through the nerve sheath constrict the nerve and are to be condemned. It is important in uniting the ends not to rotate one end more than another in order that the axis cylinders in regenerating may follow down their former sheaths.

When the gap between the cut ends is small it can be closed by mobilizing the nerve for some distance and by flexing or extending the limb—which ever movement puts the nerve on least tension—and bringing the cut ends together. In this manner a defect of an inch in the median or musculo-spiral can be compensated and three inches of the sciatic and an inch and a half of the anterior crural. Not more than a half to three-fourths of an inch of the ulnar can be gained by extending the arm but recently in an ulnar su-



ture in which I had to sacrifice three and a half inches of the nerve, I transplanted the ulnar to the flexor side of the elbow along side the median when by sharply flexing the arm I was able to bring the ends together without too much tension. Where the limb is flexed or extended to bring nerve ends together it is put up in plaster for at least three weeks and then full motion is resumed cautiously and gradually.

3. *Bridging Nerve Defects.* When we went into the war the surgeon general's office, guided by the experience of the British and French, accepted the fact that peripheral nerve repair would constitute a large proportion of reconstruction surgery. Consequently a research department in the subject was established and placed under the direction of Prof. Carl Huber of the University of Michigan, and from his laboratory has come the best work on the methods of repairing the defects in nerves. Splendid work on this subject had already been done by Dean Lewis and Kirke on the tubulization of nerve gaps with fascia lata. In this method the cut ends are drawn as closely as possible without undue tension by means of one or two strands of catgut and then the ends of the nerve and the space between them are surrounded by a piece of fascia lata sewn together to form a tube. This method has proven successful in animals—in so far as resumption of motor function and microscopic findings can determine success—but has not received sufficient clinical trial to tell how much success will follow it in man. Cargile membrane decalcified bone tubes and formalinized arteries and veins have all been used for tubulization but no one method has been tried out enough to determine what success follows it.

#### NERVE TRANSPLANTATION

Experimentally the best results have followed nerve transplantation, and Prof. Huber's work in this field has been so thorough and useful that a resume of it is in place.

The various methods of transplantation tried out were as follows:

1. Auto-transplants, in which the transplant is taken from the same animal.
2. Homo-transplants in which the transplant is taken from a different animal of the same species.
3. Hetero-transplants in which the transplant is taken from an animal of a different species.

*Auto-transplants* have given the greatest proportion of success, but the method presents serious practical drawbacks. A second incision must frequently be made to get the transplant—of course always a nerve of unimportant function—and then the patient is deprived of the function of the nerve used for the transplant.

*Homo-transplants* may be made from either fresh or preserved nerve tissue. The French have used nerve preserved in alcohol and in petrolatum, but it would be expected that the less

a nerve is altered chemically the easier would regeneration take place through it. Huber found that regeneration follows readily in homo-transplants which had been removed aseptically and kept on ice as much as forty days in liquid petrolatum.

*Hetero-transplants* have proven only partially successful and then regeneration was delayed and incomplete.

In the cases at Fort Sheridan the method of bridging defects most used was auto-transplantation. The transplant can usually be taken from the same limb—often from the same incision. In the arm the internal cutaneous can be used to close a defect in the median, ulnar or musculospiral and in the forearm a piece of the radial. In the leg the sural or communicating branch of the external popliteal to the short saphenous may be used to bridge the sciatic or either popliteal. The transplant is always smaller than the nerve to be connected, consequently two or more strands are usually sutured between the ends of the divided nerve forming a cable-like connection—hence this is often referred to as a cable transplant.

*Prof. Huber's conclusions are that some sort of protoplasmic continuity between the cut ends is necessary for nerve regeneration, and when this condition is fulfilled some regeneration will follow. The nearer the transplant approaches the nerve in biologic, physical and chemical structure the less barrier will it offer to regeneration through it.*

In the past many methods of nerve elongation and splicing have been tried but none have shown any merit over the methods described. All of them run counter to the principle that regeneration takes place only from the proximal end.

*Nerve grafting has not had sufficient trial to justify conclusions and since it always involves partial sacrifice of a completely functioning nerve it should certainly never be used as a method of election against suture or transplantation.*

#### INJECTION OF NERVES WITH ALCOHOL

For some years we have known that a nerve injected with alcohol will not conduct for from six to twelve months. Alcohol injection of the trigeminal nerve for neuralgia has been a recognized conservative treatment for some time, and it has been found equally useful in some of the more intractable neuralgias in peripheral nerves. Of course, this treatment abolishes motor as well as sensory function. In injecting a nerve it should always be exposed and injected with 50 per cent. alcohol until it becomes distended and blanched—it requires from one to five cc. to do this, depending on the size of the nerve.

Experiments made by Lewis and Huber showed that injection of the nerve trunks after amputation prevented the formation of the painful amputation neuroma. At Fort Sheridan it was the

routine practice in all amputations to inject the nerve trunks about two inches from the end with from 5 to 10 cc. of 50 per cent. alcohol.

#### PROGNOSIS

Enough time has not elapsed to tabulate statistical data of results but reliable estimation can be made from parallel animal experiments and the results attained by British and French surgeons.

There are several factors which influence the prognosis.

1. Type of lesion.
2. Location of the lesion.
3. The nerve involved.
4. Time elapsing between injury and operation.
5. Post-operative treatment.

1. *Type of Lesion.* Most prompt results follow neurolyses. I have seen complete wrist movement appear in three weeks in a case with wrist drop in which musculo-spiral had been freed from a constricting band. The least complete and most delayed results are obtained where a resection and some form of bridging are necessary. I saw no evidence of regeneration at my time of separation from the service in any of the cases of severance which had been sutured. Three cases had had primary suture and all were showing evidence of returning function where at least seven months had passed since operation. One scar incarceration of the sciatic with partial anesthesia and causalgia on which I did a neurolysis in France I saw six weeks later on my way home and his pain was gone and his sensation was improved.

2. *Location of the Lesion.* Recalling the fact that regeneration takes place from the proximal end it would be expected that return of function would be earlier the nearer the lesion is toward the periphery.

3. *Nerve Involved.* There is a curious and unexplained variation in the recoverability of different nerves which has been noted by all who have worked in nerve surgery. In the arm lesions of the musculo-spiral offer the best prognosis—next the median, and the ulnar the poorest. In the leg the external popliteal is much more likely to regenerate than the internal.

4. *Time elapsing between injury and operation.* Recovery seems to follow more promptly when operation is made before secondary changes in the nerve have occurred.

5. *Post-operative treatment.* To operate a peripheral nerve and leave it to nature is to invite, at best, only a partial result. Over action and contractures of the antagonists of the paralysed muscles must be prevented by appropriate splinting and the nutrition and tone of the muscles must be maintained by daily massage and galvanization.

Under favorable conditions the return of deep sensation will be seen in from six to twelve weeks while pain and temperature sensation and touch

do not return before twelve months. Fine epicritic sense is practically never complete. Muscular power and reaction to faradization reappear in from nine to twelve months. These periods are greatly prolonged under some conditions.

*To estimate the progress of regeneration Tinel has described a valuable sign, which is known as distal tingling on percussion. If the nerve trunk be percussed, tingling will be felt in the terminal distribution of the nerve as far down as regeneration has taken place.*

Tinel's statistics state that spontaneous recovery occurs in 60 to 70 per cent. of nerve injuries. In 108 cases of suture or transplantation recovery was complete in 22; incomplete in 72, and 14 showed no improvement. Athanassio-Bennisty reports neurolyses in 50 cases, with 1 failure; 29 improved, and 20 recoveries. Suture, 11 cases, with 2 recoveries; 3 improved; 6 slight or no improvement. Resection and suture, 5 cases; 2 recoveries, 1 partial recovery, and 2 failures. Berard reports results in 7 musculo-spirals with end to end suture and all recovered after ten months.

Cestan made clinical and electrical reactions in wounded soldiers who had been operated at least two years before and as controls examined cases which had not been operated with the following results:

Eleven musculo-spirals, with two failures and nine positive results. Two of them being practically complete restorations.

Six ulnars, three good results and three fairly good.

Two medians, both showing no return of function.

Four sciatics, one good, two fairly good, and one failure.

The improved technique which has prevailed in this country, with thorough recognition of the principles on which regeneration is based, and the splendid after treatment and observation which our soldiers are receiving, should, I feel sure, yield a higher proportion of success.

628 ELM STREET.

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*Antimeristem-Schmidt.*—A letter received by physicians from the "Bakteriologisch-Chemisches Laboratorium Wolfgang Schmidt" of Cologne, Germany, calls the attention of American physicians to Antimeristem-Schmidt. Antimeristem-Schmidt was rather widely exploited some six or seven years ago. It is a preparation claimed to be useful in the treatment of inoperable cancer and as a supplementary treatment after operation for cancer. The treatment has been found without effect and no license for the sale of Antimeristem-Schmidt has been granted by the U. S. Treasury Department and therefore its importation into this country is prohibited.—(*Jour. A. M. A.*, Dec. 6, 1919, p. 1787).



# The Clinicians and the Collections\*

N. William Ingalls, M. D., Cleveland

Editor's Note.—It is with pleasure that the Editor offers Dr. Ingalls's contribution and plea to readers of The Journal. Members of the Association should deem it a privileged opportunity to send specimens to enhance such collection as those of the Laboratory of Anatomy of the Western Reserve University School of Medicine. Aside from his request for material, Dr. Ingalls enters into a most interesting exposition of some of the fundamental considerations of embryology and teratology. He offers a beautiful comparison of the normal and pathological embryo and illustrates many striking features in several plates. He does not hesitate to venture certain speculations concerning the etiology of bizarre embryonic malformations and pathological changes, as supported by the investigations of experimental teratology. According to Dr. Ingalls developmental disorders are much more uncommon in nature outside the race of man and this is one of the numberless ways in which man pays for his boasted civilization.

IT is now some little time since any formal effort has been made to interest the medical profession in the collections of Embryology and Teratology in the Anatomical Laboratory of this institution, or to enlist their co-operation in the further development of these collections. In the CLEVELAND MEDICAL JOURNAL of October, 1914, under the title of "Research Needs and Clinical Opportunities," I took occasion to indicate to the local profession the needs of the research worker in human embryology and teratology, and the opportunities which are offered the clinician to supply the necessary material.

At the present time, in addition to submitting our appeal to a much wider circle of readers, it is possible to give some detailed account of the collections, which in the meantime have increased several fold in extent and value. This account will, we trust, prove of interest alike to those whose contributions in the past have made the collections possible, and to those to whom the subject is now presented for the first time. Before entering upon a consideration of the collections, a few lines may be quoted from the above-mentioned article concerning the embryological and teratological material in which we are particularly interested.

## THE SORT OF SPECIMENS DESIRED

"That there is a considerable amount of such material is unquestioned, but unfortunately only a small part ever finds its way into the laboratory, where it first becomes valuable and where alone it can receive the examination and study which it deserves. It may not be so evident, however, that any great value attaches to this embryological and teratological material, this flotsam and jetsam of the sea of life, which falls into the hands of the physician and surgeon.

"All material is valuable. Our knowledge of the development of the human embryo is by no means complete, being particularly fragmentary in respect to the earlier stages. But regardless of the size of the specimen, be it old or young, fetus or embryo, it has in any case its own peculiar lesson to teach.

"Teratology, or the science of malformations and monsters, is yet in its infancy, and progress can only be made by the careful study of all specimens which can be procured, whether occurring in man or in lower animals. I have said that all material is valuable, and this is especially true in teratological studies. A large percentage of abortions and a still higher percentage of tubal gestations contain embryos or fetuses which are not normal. But it is exactly here, in the *pathology of embryology*, in the study of abnormal ova and young monsters, and, wherever possible, of the uteri and tubes in which these were developed that we have to seek for an explanation of these abortions and for the factors concerned in the production of monsters. The study of normal and abnormal development must go hand in hand. The field is large and in certain directions almost uncultivated, and our plea is that the rich and varied material which is present may be made available for purposes of investigation. I would include here: everything expelled at abortion, either spontaneous or induced; tubal pregnancies, as far as possible intact; pregnancies *in situ*, i.e., hysterectomies in cases of pregnancy; curettings, where one or more periods have been passed; in a word, anything which could be classed among the products of conception, be they small or large, embryonic or at term, normal or monstrous."

## CLASSIFICATION OF MATERIAL

The combined series of embryology and teratology includes, at the present writing, nearly 400 specimens, catalogued and photographed. A word regarding the classification of this material may be in order here. The embryological series is exclusively human, and contains normal as well as abnormal and pathological specimens. In the teratological series, distinguished by a "T" before the serial number, are included all the comparative specimens, among them the dog, chick and pig. Abnormalities of any kind, occurring in specimens older than two months, the time at which one may make the arbitrary distinction between embryo and fetus, we have placed, for various reasons, in the teratological series, earlier cases remaining as embryological.

\*From the Laboratory of Anatomy, School of Medicine, Western Reserve University, Cleveland.

No. <u>18.A.</u>	COLLECTIONS OF EMBRYOLOGY AND TERATOLOGY	C.R. <u>12.4 mm.</u>
<u>Twin, Binovul.</u>		G.L. <u>12.9</u>
<u>Good.</u>	DEPARTMENT OF ANATOMY, SCHOOL OF MEDICINE, W. R. U.	Sex. _____
Specimen <u>Embryo and Vesicle, Living.</u>		
Embryo <u>C.R. 12.4, G.L. 12.9.</u>		
Chorion Ext. _____ Int. _____		
Age <u>43 days. Menstrual</u>	Pregnancy _____	
Fixation <u>Picric-sulphate.</u>		
Photographs, etc. <u>E. &amp; Sac. X1, X5. Living, in salt, X5.</u>		
<u>E. R. &amp; L. view. X1, X5.</u>		
Reconstructions, <u>Ovary septum X25.</u>		
<u>Arteries, X25.</u>		
<u>Veins, X25.</u>		
Source <u>Dr. S. A. Hamann, Oct. 16, 1911.</u>		
<u>Operation, Fibroids.</u>		
	Sections <u>Embryo, +, 10<math>\mu</math>, 1150, 28 slides</u>	
	<u>H&amp;E, and 3 Eosins.</u>	
	<u>Chorion, 10<math>\mu</math>.</u>	
	Notes <u>Embryo &amp; Vesicle.</u>	
	Publications <u>No. 7.</u>	
	Remains <u>Vesicle.</u>	



Figure 1. Method of classifying and cataloguing specimens in the collection of embryology.

A considerable number of fetuses in the later months of pregnancy and at term, among them several cases of twins and triplets are not included in the enumeration given above.

The manner in which the records are kept may be seen from a card taken from the card catalogue and reproduced in Fig. 1, reduced about one-half. On these cards space is provided for one or more photographs of the specimen as well as for the more important data regarding the same. As each new specimen comes in, a printed form, with a stamped return envelope, is sent to the donor for important data from the clinical history.

In the upper right hand corner of each card (Fig. 1) the measurements, and if possible the sex of the specimen are noted. It was formerly customary to classify or designate embryos according to their age,—or rather their supposed age. The compilation of more exact and extended data soon showed that the accurate determination of the age of a given embryo was extremely difficult and uncertain, if not quite impossible. Today, when we know much more about the age of early embryos, we hear much less upon the subject. In speaking of age it is necessary to re-

member that we may have in mind either the real age or the menstrual age, and both are usually noted on the cards.

#### AGE, LENGTH AND STAGE OF DEVELOPMENT

The menstrual age is, of course, the standard used by the physician, since the cessation of menstruation is not only an early and cardinal sign of pregnancy, but also the only definite point of time upon which it is possible to base any calculations. However, conception may occur early in life, before the menstrual flow is established, during amenorrhoea, or, as is not at all infrequent, menstruation may persist for a longer or shorter time after the beginning of pregnancy. When we add to this uncertainty the fact that we do not know the exact time relation between ovulation and menstruation, or even if it be a constant one, it becomes evident that the so-called menstrual age, while it may possess great practical value, is of little if any use as a basis for scientific classification. At present embryos are usually referred to as being of a certain size, i.e., length. But the study of a few embryos of the same size reveals the fact that they are not all necessarily at the same stage of de-



velopment. We may assume that they either differ slightly as to their actual ages or that they have not all developed at the same rate or in exactly the same sequence of stages, and doubtless both assumptions will be correct. We are gradually learning that the variability which characterizes the adult organism, stretches far back into development, probably even to its very beginning. Indeed, there need be nothing surprising in this, for the differences in the adult form are largely the expression of differences in the embryo and, back of this, in the germ cells. The greater size and complexity of the adult naturally offer a much wider field for variability but much of this has been inherently present in earlier stages. One comes to the conclusion, therefore, that the best way to classify embryos is according to the stage of development, regardless of their size and regardless of their supposed or probable age. This means that it will often be necessary to strike an average since it cannot be expected that all parts of the embryo will develop at the same rate in every case.

The *real* age of an embryo or fetus must, of course, be dated from the moment of fertilization, the union of the spermatozoon with the ovum. The age, in this sense, of a human embryo is manifestly impossible to determine, and its scientific value, even if obtainable, would be more apparent than real. It is, however, in just such cases as this that comparative embryology comes to our aid. By means of observations and experiments on animals it is possible to form a fairly accurate idea of the time which elapses between insemination and the arrival of the spermatozoa in the outer end of the tube where they will meet and fertilize the ovum; also the time consumed by an ovum in transversing a uterine tube of given length; further the rate of development can be closely followed and the age in a given case often determined to a matter of hours. With knowledge of this kind at hand one is enabled to form a much more accurate estimate of the real age of early human embryos, but at best and in any case it is only an approximation. This approximation to the real age is, however, more consistent and reliable than any obtained from purely menstrual data.

Since it is the age of a specimen which always excites the most interest, the following brief table has been prepared showing the length of the embryo and its probable real age:

Age Full weeks	Length		Sac. outside dimensions
	mm.	inches	
4	3	1/8	15x10
6	12	1/2	35x30
8	24	1	50x45
12	68	2 5/8	

The age as given in this table may be considered as from 9 to 10 days less than the mean menstrual age, and we may also add that the tabulation above applies to normal embryos only.

#### CHARACTER OF SPECIMENS

Under the serial number in the upper left

hand corner of the card, the character of the specimen is noted, *i.e.*, whether normal or pathological, and beneath this what may be termed the quality, or state of preservation, as good, fair, poor, etc. While naturally a perfectly normal young embryo may well be the pride of a collection, such specimens are always in the minority in any laboratory which preserves all the material which it may receive. Nor must one suppose that this pathological material has not its proper place in a series which has as its goal, the covering of the entire field of human development. The extent to which normal anatomy and physiology are indebted to the clinician and pathologist is too well known for one to imagine that from this often misshapen material much important knowledge may not be gleaned.

The term pathological in referring to early embryos, we have used, perhaps somewhat loosely, in contradistinction to normal, and as indicating any deviation from the usual course of development. In this use of the term these embryos may be divided into two main groups.

1. Those cases in which development has not pursued its accustomed course, but nevertheless the constituent cells and tissues are apparently healthy, if not absolutely normal, and, as far as the embryo itself is concerned, there is nothing to prevent its continued growth and development, howbeit, more or less malformed. It would be better, perhaps, to refer to these cases as abnormal or malformed since they represent the embryonic stage of the future monster. Here belong the infinite variety of malformations of all grades which go to term or are even not incompatible with a continued independent existence. This class of specimens is, however, extremely small. In other words the various kinds of malformations and monsters which are so often seen at term are very rarely encountered during the early stages of their development. In our own series we can find but two cases which could be properly brought under this rubric. No. 50 is an extremely rare form of dicephalus at the end of the second month, 24 mm long; No. 83, about five weeks old, presents a lumbo-sacral spina bifida. No. 46, while exhibiting some malformation, is distinctly pathological and would therefore fall in the next group. Even the relatively common anencephaly and rachischisis are always far more frequent in a teratological than in an embryological series. The reason why there is such a dearth of this exceedingly interesting and valuable material is not far to seek. We have only to remember that the severer grades of malformation are rather infrequent and further, that, of the early embryos which are capable of continued development, the great majority go to term unless there is interference from without. To this may be added the fact that only a very minute fraction of the available embryological material ever finds its way into an anatomical laboratory.

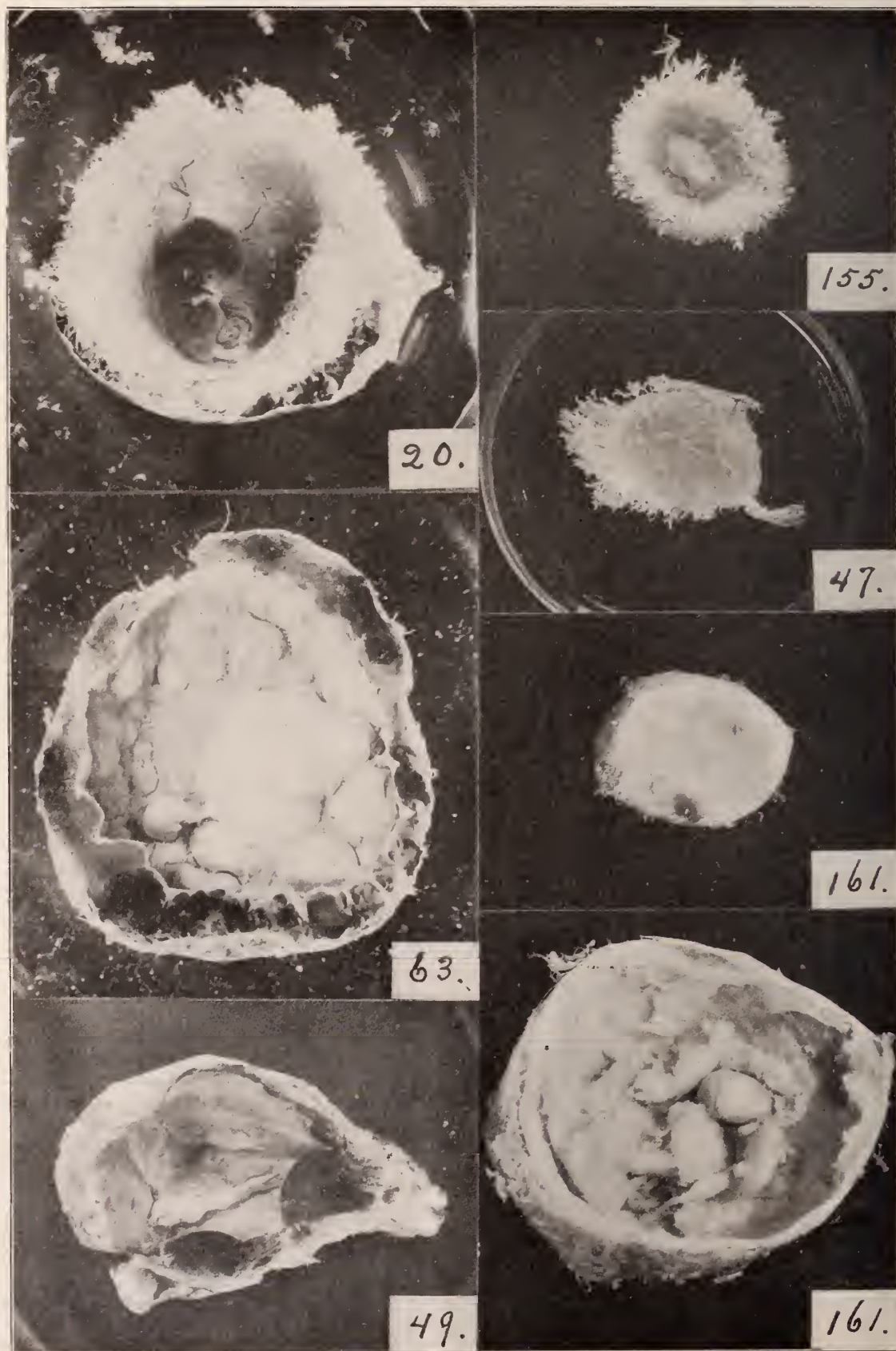


Plate 1. Two normal, No. 20 and No. 155, and four pathological vesicles. All natural size.



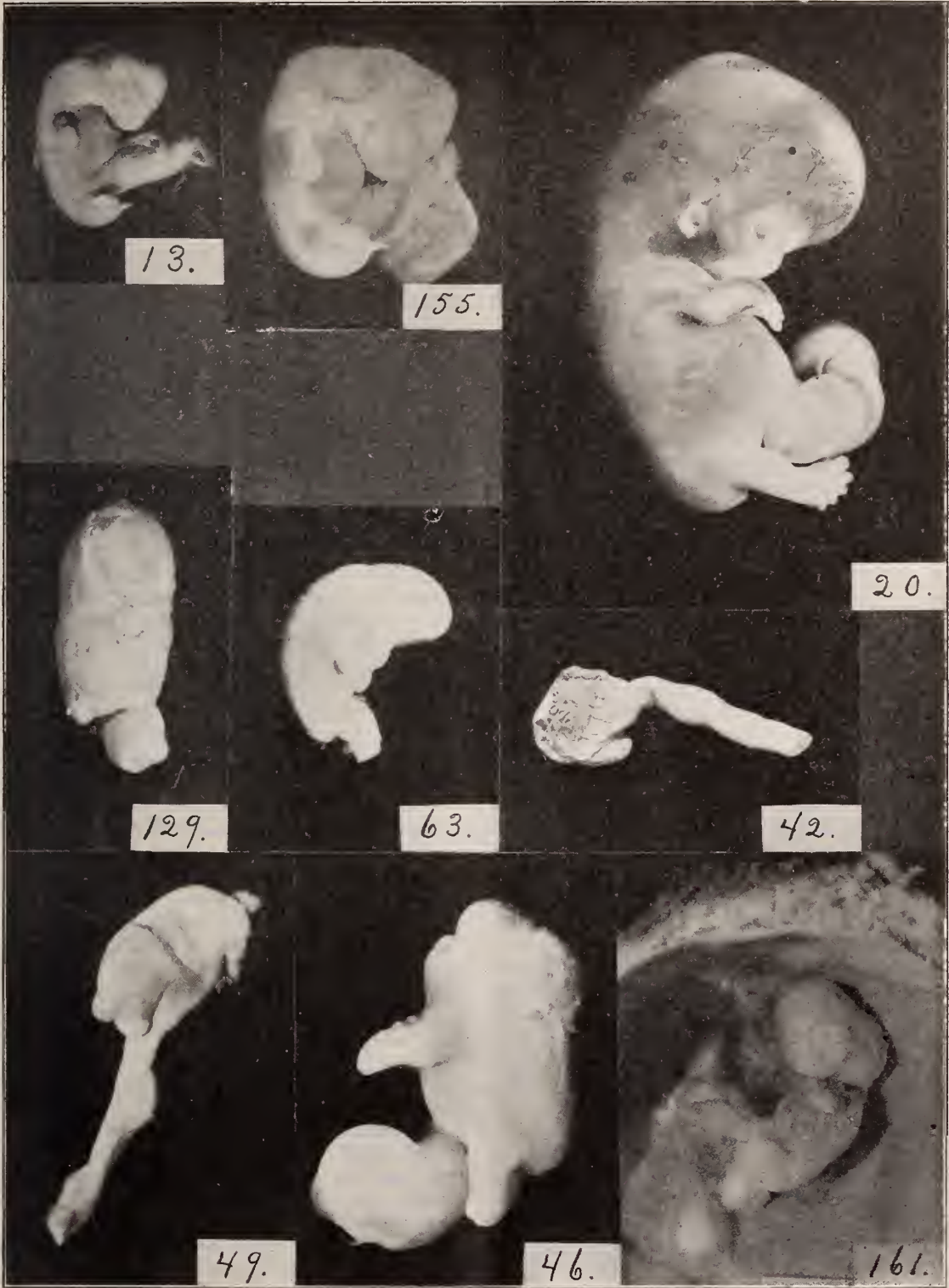


Plate 2. The three embryos at the top, No. 13, 155 and 20 are normal, the remaining six are pathological. All are represented at the same magnification, x 3. The heavy coagulum shown in No. 161, Plate 1, was removed before the photograph on this plate was taken. For further details regarding both plates, see text.

2. This group includes the vast majority of pathological embryos. In these cases there are frankly pathological changes in the cells and tissues, and such changes may of course be engrafted upon either a normal or upon a malformed, but otherwise healthy embryo. Examples of this class of cases are very common, particularly during the first two months, when they make up the bulk of the material obtained from spontaneous abortions. The reason is very simple, they are aborted because they are pathological and so are treated by the uterus like any other foreign body. Of the hundred odd embryos under two months in our collection, approximately two-thirds come within the group we are now considering. After two months they are very much less frequent, and again for the same reason. They are all so markedly changed that they are not often retained for more than six or eight weeks.

At this juncture we may institute a brief comparison between normal ova and this second group of pathological cases. Many of the characteristics to which reference will be made can be verified by an examination of Plates 1 and 2, where photographs of a few of the more typical cases have been reproduced.

#### COMPARISON OF THE NORMAL AND PATHOLOGICAL EMBRYO

A normal, living embryo, observed about the middle of the second month, is a most wonderful object. Like other healthy, living tissue it is distinguished by a beautiful translucency which, in certain regions, gives way to absolute transparency. The soft, clear, straw-color mellows the outlines of the developing structures within. Most conspicuous, on account of the contrast, are those regions in which pigment is being formed or where there is blood in special abundance. On the one hand the jet-black ring of retinal pigment; on the other the alternate blushing and blanching of the thick walled ventricular portion of the embryonic heart, the steadier, deeper color of the thinner atria above, and the great purple mass of liver below. The central nervous system, which at this stage determines in itself alone the size and shape of the head, thus stamping the embryo as human, can be seen with all its various subdivisions. Blood vessels are always in evidence, in the embryo, cord, yolk sac and on the inner surface of the chorion. Closely enveloping the embryo is the gossamer veil of the amnion, separated from the vesicle wall by the relatively wide extra-embryonic coelom. The chorionic vesicle is thickly set externally with long, richly branched villi, which in the recent state are bathed by free maternal blood. As development proceeds the chorionic villi gradually become restricted to a comparatively small area, the placenta; the exocoelom is slowly encroached upon by the enlarging amniotic cavity until it is

definitely and completely obliterated as the amnion becomes adherent to the chorion.

With the picture of the normal as just given, the typical pathological embryo stands in unmistakable contrast.

A turbid opacity masks completely the internal organization; the warm normal tint may give way to an unnatural, chalky palor, or, more commonly be replaced by a sickly, brownish cast, also seen in much older specimens where it is more clearly a post-mortem change. The delicate, though definite surface markings, which mean so much in early stages, are here entirely wanting. Some of these misshapen or stunted forms may later undergo extensive tumefaction (No. 46) which in its last stages reduces the embryonic body to an almost shapeless mass (No. 129.) The most striking changes occur in the head region, severely malformed in No. 46, it has suffered still more in No. 63, while in No. 49 the head is as good as absent. No. 129, swollen and shapeless, betrays nothing whatever regarding its internal structure; No. 42 is also less than a complete embryo, but shrunken and stunted as well. It is only necessary to carry these morbid processes a little farther, not so much in time as in severity, to bring about conditions where only the cord or small portions of embryo still persist (No. 171), or where not even the remnants of an earlier embryo can be discovered (No. 32.) Quite as characteristic as the changes in the embryo are those which involve its enveloping membranes, *i.e.*, the amnion and chorion. In Nos. 20 and 155 on Plate 1 the amnion is faintly seen, snugly investing the embryo, and as yet at a considerable distance from the chorion. In the other cases shown on the same plate the amnion is so distended that it is fused with the chorion, so obliterating the exocoelom. It will be noted also that in all these pathological cases the chorionic vesicle is disproportionately large as compared with the embryo contained within. In other words we have before us the very common condition of hydramnios which not infrequently as in Nos. 37, 45, 70, 180 and 261, reaches the most grotesque proportions, an immense amiotic cavity tenanted only by a tiny embryo. We may mention in passing that hydramnios in later months or at term is more frequent with monsters than with normal fetuses and the same is true of malpresentation. The clear, pale amber fluid which normally fills the cavity of the vesicle, both amnion and exocoelom, undergoes various changes. Where excessive in amount it is often watery and colorless, otherwise it is frequently turbid and more or less discolored. Occasionally granular deposits are found (No. 63) or heavy flocculent or gelatinous masses (No. 161), while in extreme cases the vesicle cavity is completely filled with a homogeneous jelly-like substance (No. 88.) The chorionic wall is often thin and almost if not quite bloodless, its sparsely scattered villi, short and poorly developed (Nos. 47 and 161.) Although



blood vessels can rarely be seen anywhere there is very commonly extensive haemorrhage (Nos. 49 and 63,) and the vesicle may become imbedded in laminated layers of clotted blood, and so shut off entirely from its only source of nourishment.

#### ETIOLOGICAL CONSIDERATION

Before venturing a few words concerning the etiology of these bizarre conditions we would again recall the statement that we are dealing with cells and tissues which are clearly pathological rather than with any malformation in which the constituent cells and tissues may be quite normal and healthy. The staining reactions of the tissues is always markedly impaired, the various organs, or their remains, may be all but indistinguishable on account of the loosening of all cell-connection, a condition of dissociation with cells of all kinds mixed together in a most inextricable manner. That continued growth and development are entirely impossible in these severe cases is perfectly obvious, and in fact the majority of them are hopelessly moribund if not quite dead at the time of abortion.

There is every reason to believe that the great majority of these cases start out as normal ova and only later suffer from severe reverses. The various factors which are capable of influencing development may be placed in two major groups: internal and external. The former are resident in the germ cells, either as hereditary tendencies,—there being many hereditary malformations,—or as altered or impaired potentialities or capabilities, superinduced by unfavorable or noxious influences and transmitted by the sex cells to the cells of the ovum. It is needless to say that the cases we are considering are not hereditary, while the influence of any abnormal germ-cells is exceedingly small.

External factors may be anything outside the ovum itself. It goes without saying that certain conditions are absolutely essential to normal development, regardless of the form of animal life considered. Prominent among these are temperature, proper nourishment, and an adequate supply of oxygen. Experimental teratology has shown us that a large number of physical agents and an infinite variety of chemical ones are able to alter or even arrest development. We have learned also that the tolerance of the embryo is fixed within very narrow limits for changes in the physical or chemical character of its environment. It would seem that physical factors can be ruled out in the cases which we are discussing, leaving therefore the question of chemical possibilities.

The ovum at first derives its nourishment from the little secretion it finds in the tube and uterus, it soon uses to the same end the cells and tissue fluids of the uterine mucosa, and next, and throughout the remainder of its development, it feeds directly upon the free maternal blood. A

prime requisite for normal development is proper implantation of the ovum in a healthy mucous membrane. A healthy ovum, upon its arrival in the uterus, may find conditions unfavorable to a speedy and normal implantation; the maternal tissues may be altered so as to offer resistance to the ovum, or fail on their part to react as they should toward the embryonic tissues. To this may be added, as an uncertain quantity, the possibility of the presence in such a uterus of deleterious substances. We know from experiments that these hypothetical substances need be present only in very small amounts and again only for a brief period of time. It is in the first weeks of pregnancy that these developmental disorders have their origin, and for many and obvious reasons these early days are of the utmost importance. The tiny ovum as it reaches the uterine cavity has primarily two great tasks before it, either a *sine qua non* for any further progress. In the first place it must form an elaborate and extensive investing membrane, a membrane at once protective and nutritive, the chorion; in the second place proper relations must be established between this membrane and the source of its nourishment, the maternal tissues and later the maternal blood. The first, as a function of the early embryonic cells, never fails, the second requirement is much less certain of accomplishment.

Since the chorion is so peculiarly important, it is very precocious in its development and attains considerable dimensions, while the embryo proper is still very small. It is not only precocious, but also more resistant and of course more independent than the embryo. While naturally the chorion must bear the first brunt of all untoward influences, the effect, secondarily, upon the more sensitive embryo within, is much more rapid and disastrous. That the chorion suffers from its unfavorable environment may be seen by reference to Plate 1, but on the same plate is the evidence that the chorion may continue to grow for some time after all development if not all life in the embryo has ceased. This independence of the chorion, although limited, finds its expression in the various forms of moles; the Breus' mole or haematomole (Nos. 63, 101, 232) blood moles (No. 208) and hydatid moles (No. 141.)

#### RESULTS OF EXPERIMENTAL TERATOLOGY

The results of experimental teratology do not as yet offer much assistance in assigning definite causes for the conditions above described. In general they may be looked upon as the effect of an abnormal environment upon a normal ovum or the failure of an originally normal ovum to relate itself properly to its surroundings, be these what they should be or not. This is borne out by the high percentage of pathological ova occurring in ectopic cases where the surroundings are wholly different from those which obtain under normal conditions. All this would appear to

place the bulk of the blame upon the uterus, but it is not possible to be more specific; the seed has, as it were, fallen upon stony ground. These developmental disorders are certainly uncommon in nature outside the genus *Homo* and doubtless within this genus, certain classes or strata of society would be more frequently represented than others. In part, at least, this is one of the numberless ways in which man pays for his boasted civilization.

This account of our work has already grown to quite unexpected proportions. Many examples of normal and abnormal development might have been introduced, while the important teratological series has hardly been mentioned. Further consideration of the problems growing out of the collections must await a future occasion.

We are sure that there is a great deal of material which would be of inestimable value in our research in human embryology. Many a rare and interesting specimen has languished in some forgotten bottle, when its name,—or number,—might have been written large in the annals of the science. To those who may be moved to

co-operate in this work, we would offer the following suggestions:

#### THE PROPER PRESERVATION AND FIXATION OF THE SPECIMEN

The proper preservation, or fixation, of the specimen is of the utmost importance. It should be placed, *intact*, at the earliest possible moment in several times its own bulk of a 10 per cent solution of formalin (1 part commercial formalin and 9 parts water.) If formalin, which is preferable, cannot be obtained, the object may be put into *strong* alcohol. If the receptacle in which it is placed be completely filled with the liquid—excluding all air and so avoiding undue shaking—the whole may be safely sent at once to the Anatomical Laboratory. Any expense entailed will be borne by the laboratory.

Any and all material will be gladly received and find its proper place in the growing embryological and teratological collections of the Anatomical Laboratory. In conclusion we would take this opportunity to thank again those whose generous contributions in the past have made these collections possible.

## Etiology and Treatment of Prolapse of the Uterus and Bladder\*

G. Mombach, M. D., Cincinnati

Junior Obstetrician, Jewish Hospital, and Consulting Gynecologist and Obstetrician, United Jewish Charities Dispensary, Cincinnati

**Editor's Note.**—According to Dr. Mombach prolapse of the uterus and bladder is almost invariably due to the effects of childbirth injuries. Consequently he urges that in the treatment of prolapse prevention is always better than cure, and it should always be impressed on the general practitioner that care should be exercised during the conduct of labor to prevent any injury whatever that may lead to complications. In Dr. Mombach's opinion it is better to do an episiotomy than to allow serious lacerations to occur. It is also important to repair childbirth injuries at the earliest possible moment. While poor surgical risks may be accorded the questionable relief of pessaries, all other patients should be given the benefits of a completely remedial operation. The surgical procedure indicated for various stages of prolapse are detailed by Dr. Mombach.

**P**ROLAPSE of the uterus and bladder are caused by a change in the normal anatomy of the pelvis. Therefore to properly study the causes of these conditions, we must try to elucidate the normal anatomy and physics of the pelvis.

#### NORMAL ANATOMY

The pelvis is spanned by two slings or planes of muscles and connective tissue. Each of these planes extends all the way around transversely, diagonally and antero-posteriorly. The two planes are located one above the other.

The *lower plane* is usually known as the pelvic floor. It lies below the vagina and is composed of the levator ani muscle and its sheath. The pelvic floor is not an absolutely solid muscular floor, but has three openings running through it. These are the rectal orifice, the urethral orifice and the vagina. Nature has, however, tried to make the pelvic floor as solid as possible.

The rectal orifice is protected by the bend in the

rectum and by the rectal sphincters. The urethra is a narrow canal immediately under the bony arch of the pubis and is of no practical significance as far as being considered a material weakness in the pelvic floor. Nature has helped to eliminate this weakness by placing it far forward out of the line of direct pressure, by making it a flat tube, so that the intra-abdominal pressure tends to close it, and by placing the upper pelvic plane and the body of the uterus above it.

The *upper pelvic plane* lies above the vagina and is composed of two segments, *namely*, the uterine segment and the vesical segment.

The uterine segment consists of the uterine parametrial tissue and its overlying peritoneum. The parametrial tissue is known laterally as the ligamenta cardinalia, which are the base of the broad ligaments; posteriorly it is known as the utero-sacral ligaments and anteriorly as the utero pubic fascial tissue.

The vesical segment is the anterior part of the

\*Read before the Cincinnati Obstetrical Society.



utero-pubic fascial tissue and the bands of connective tissue connecting the bladder to the uterus, and to the broad ligaments especially along the ureters and out to the pelvic bones.

The force which would tend to cause the pelvic organs to prolapse is the intra-abdominal pressure. This is resisted in a normal healthy woman by the two strong supporting planes and by the fact that the normal uterus is anteverted and slightly antelected. In this way the intra-abdominal pressure is exerted upon the broad posterior surface of the uterus and in this way it loses its effect by being spread out over a large area. The broad corpus uteri is pressed over the upper vaginal opening and thus the upper part of the vagina is closed off. As the corpus uteri is pushed forward, the cervix is pushed backward. This tends to approximate the vaginal walls, and further protects the woman against the weakness which is caused by the vaginal canal piercing the lower pelvic diaphragm.

#### EFFECTS OF CHILD BIRTH INJURIES

We have seen that under normal conditions, while the pelvic floor is weak, yet nature has carefully compensated for this weakness. This is all different as soon as the woman has received an injury during childbirth. Unless the injury has been successfully repaired, a link in the chain of compensation will have been broken and intra-abdominal pressure cannot successfully be counteracted.

Injuries acquired during labor mean, that we have tears through any or all of the supporting planes of the pelvis or simply an over-stretching from a large head or an instrumental delivery.

Cervical tears are of great importance in that they, frequently involve the cardinal ligaments so that these become the seat of a low-grade infection with subsequent weakening of their supportive powers. The cervix thus pushes itself forward. These cases are usually accompanied by a chronic metritis or subinvolution of the uterus. These uteri are heavy and tilt backward very easily. When once the uterus is tilted back so that we have a retroversion, it is an easy matter for the intra-abdominal pressure to force the uterus down, since the axis of the uterus and of the vagina are now coincident, and the entire force of the intra-abdominal pressure is exerted on the fundus uteri. Tears or overstretching in the lower pelvic sling, tend to make the pelvic floor still weaker. The levator muscles are torn or overstretched, the vaginal tube gaps open and with each act of defecation, coughing or sneezing the anterior rectal wall is pushed through the vagina, thus forming a rectocele or hernia of the rectum into the vagina.

When the utero-pubic fascial tissue has been injured, the bladder loses its support and when filled, it stretches the anterior vaginal wall. After a while there is in reality a hernia of the

bladder through the vagina. These cystoceles can assume enormous proportions and are frequently mistaken for a prolapse of the uterus.

#### STAGES OF PROLAPSE

Uterine prolapses can be divided into three stages.

1. The uterus is prolapsed but the cervix still remains within the vagina.

2. The cervix is outside of the vagina, but the body of the uterus is still within.

3. The entire uterus is outside of the vagina and the vaginal wall may or may not be pulled with it. These cases are always accompanied by enormous cystoceles and often present a horrible appearance, as the prolapse may extend down to the knees of the patient.

#### TREATMENT OF PROLAPSES

We will now consider the treatment of prolapse. Prevention is always better than cure, and it must always be impressed on the general practitioner that care should be exercised during the conduct of labor. The head should be held back with the hand as soon as it begins to pass over the perineum, so as to allow a slow stretching to take place, and prevent a laceration of the perineum. Should a laceration seem imminent, it is far better to do an episiotomy, than to allow tearing to take place. This simple cut may be located centrally, laterally or bilaterally. If the child is delivered by forceps or version, great care must be exercised. These operations must never be done before the cervix is completely dilated or else a laceration of the cervix and most likely a rupture of the ligamenta cardinalia is apt to occur. Repair all tears carefully.

In selecting cases of prolapse for operation, we will have to consider:

1. The age of the patient.
2. The degree of prolapse.
3. The general physical condition of the patient.

We will dispose of the latter consideration first. Those patients suffering from cardiac, renal, or pulmonary complications, and those who for other reasons, such as diabetes, are considered poor surgical risks, should not be operated upon. In these cases a well fitted pessary will frequently answer the purpose. Vaginal douches are also very valuable in these cases.

Having decided that the case is one for operation, we must carefully consider the age and the degree of prolapse.

Young women who still desire to have children, must have an operation performed which does not interfere with future pregnancies. If the uterus is prolapsed slightly, a round ligament operation of the Gilliam type with a complete repair of the pelvic floor will usually suffice. If there is a cystocele, this should be repaired by dissecting the bladder from the uterus (by the vaginal route) and then sewing the base of the bladder

higher up on the fundus uteri, thus lifting as it were the bladder higher in the pelvis. The fascia on each side is then sewn together and finally the mucous membrane is joined together again.

Cystocele operations of the purse string suture type are to be condemned, as they only tend to form scar tissue with subsequent relaxation.

Following all cystocele operations it is wise to insert a retention catheter, or to catheterize frequently for a few days.

Where there is a marked rectocele, the pelvic floor repair must correct this condition. Where there is a complete tear of the perineum into the rectum, I prefer to do a modified Lawson Tait operation, modified to the extent that the two levator ani muscles and their fascia are caught and sewn together in the midline with Kangaroo tendon. This will shorten the pelvic sling and restore the parts to a satisfactory condition.

In those cases where the perineal laceration has not extended into the rectum or where there has only been a severe stretching of the pelvic sling, either the Emmet denudation operation or one of the operations which open the pelvic floor and shorten the levator sling can be done to great advantage. The Emmet operation, done skillfully, is very satisfactory, as it shortens the pelvic sling laterally in the region of the previous tear.

I personally prefer to open the pelvic floor by lifting a triangular strip of mucosa from the posterior vaginal wall, as in the Hegar operation, and then with hemostats I search for and pick up the levator muscles and their overlying fascia. These are sewn together in the median line with Kangaroo tendon or 40 day chromic catgut, and the superficial fascia and finally the mucous membrane are brought together as in the Hegar operation.

In women, at or near the menopause, with prolapse of the uterus of a moderate degree, or with a very large cystocele, there is no better operation than the interposition operation of Watkins-Shauta-Werthheim. In this operation the uterus is utilized as a living pessary to hold up the prolapsed bladder.

The patient must always be sterilized to prevent serious complications which would result if she became pregnant. A word of caution about this operation. If the uterus is too large to fit easily under the pubic arch, a large enough piece must be resected from the fundus. If this is not done, a gangrene of the uterus is apt to occur, resulting in sepsis and death. I have twice resected a portion of the uterine fundus before interposing the uterus, and have experienced no bad result.

There is very little shock connected with this operation and patients stand it remarkably well.

A thorough perineal repair must always be done. If the cervix is elongated, it should be amputated.

Those women, at or near the menopause, who

suffer chiefly from a uterine prolapse of the first or second class as well as younger women who have a second degree prolapse should be sterilized and then have a firm ventro-fixation done. In these cases the supportive tissues have been so badly stretched that it is impossible to repair them or use them as a support for the uterus. The uterus is best held up in these cases by fastening it after removal of some of its peritoneum to the rectus muscle. If the cervix is elongated, it should be amputated. A complete perineorrhaphy must always be done in these cases also.

#### HANDLING COMPLETE PROLAPSE

We still have to consider that horrible type of prolapse, in which everything is out of the vagina. These cases are surely trying and usually a combination of the above procedures will be tried. Ventro-fixation frequently gives good results, if followed by an extremely high perineorrhaphy. Usually it is wise to replace the prolapsed and ulcerated organs and hold them in place with boroglyceride, or tannic acid tampons for several weeks, thus allowing the oedematous parts to heal.

Vaginal hysterectomy with implantation of the stumps into the upper part of the vagina together with a very high perineorrhaphy is also a very good procedure.

In an old woman with an enormous prolapse, which was ulcerated and entirely unable to be replaced, I hemisected the entire uterus and vagina and removed the entire genital tract in two halves. I then sewed the raw area together from side to side and from before backward, finally bringing the levator ani muscles together in the median line. When I finished, the patient had a solid perineum as in the male, extending from the urethra to the rectum. With the exception of a small catgut fistula which persisted for several weeks, until the catgut came out, she made an uneventful recovery. The interesting feature was the entire absence of shock following this operation, which certainly seemed to be a hazardous one.

22 WEST SEVENTH STREET.

*The New Bacchus.*—No longer should artists—at least American artists—represent Bacchus astride a wine barrel: the little god should be depicted astraddle a "patent medicine" bottle. As every physician and pharmacist knows, there are on the American market a number of widely advertised and extensively sold "patent medicines" whose most potent ingredient is alcohol. The problem of controlling these alcoholic "patent medicines" can be satisfactorily solved in only one way, and that way is to prohibit the use of alcohol in preparations of the "home remedy" type, that is, in those products which are sold indiscriminately to the public for the self-treatment of disease.—(*Jour. A. M. A.*, Dec. 6, 1919, p. 1772).



# Mineral Nutrients and Vitamines in the Diet\*

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**Editor's Note.**—We are just beginning to appreciate the importance of mineral nutrients and vitamins in every day diet. Attention has been drawn to their importance through conditions of disease arising from their deficiency. The lack of the so-called water-soluble vitamin causes beriberi; the lack of the fat-soluble vitamin causes xerophthalmia and a third vitamin, about which there is no unanimity of opinion, but which is present in fresh fruits and vegetables, prevents scurvy. A similarity between the water-soluble vitamin and secretine has been recently demonstrated. This probably accounts for the super-abundance of this principle in all common foods of the ordinary dietary. The role which the fat-soluble vitamin plays in the human economy has been strikingly depicted in the extreme malnutrition and lack of growth of children in the districts in Europe in which, during the war, they were deprived of milk, butter, eggs, and essential fats. Scurvy has also been prevalent in the war-ridden countries. As infantile scurvy is known to be, and rickets and pellagra are believed to be conditions due to deficiency of vitamins, the general practitioner will find Mr. Forbes' detailed consideration of these and other disease conditions in relation to diet of exceeding interest.

**D**URING the past half-century the nutritive functions of proteins, fats and carbohydrates have been revealed in such detail that the main facts about them may be regarded as firmly established and generally understood. The last important advance in our knowledge of these great groups of nutrients was the rather recent demonstration of the composition of plant and animal proteins from a number of amino-acids combined in proportions characteristic of the particular protein; also the fact that most of these amino-acids can be formed by plants alone, and the corollary fact that the nutrition of animals requires these amino-acids to be present in the diet in definite amounts and proportions. For these facts we are indebted to Fischer, Osborne, Mendel, Van Slyke, and others.

As our knowledge regarding these classes of nutriment, which compose almost the whole of the dry substance of our food, approached completion, it became apparent to all careful students of animal feeding that there remained to be explained certain important differences in the values of rations which were due to a control exercised by substance present in comparatively small amounts. The attention of investigators was naturally turned to a more critical study of the mineral nutrients, which, though inconspicuous as constituents of foods and animal bodies alike, have been shown to be the agencies through which is maintained that coördinated system of response to electrical stimulation which is life itself. Great progress has been made in our knowledge of the mineral elements in nutrition, but so great is the complexity of the facts that many points will remain for explanation by generations yet unborn.

## MINERAL ELEMENTS IN NUTRITION

As to the functions of the mineral nutrients, their control over metabolism is so fundamentally essential that life can endure only under conditions such that the mineral requirements are

almost perfectly satisfied; and the various factors and provisions of safety which protect the organism from mineral insufficiency are of such effectiveness that it is only under exceptional circumstances that there is injurious mineral shortage. It is true that these circumstances do arise, but time does not permit us to discuss the practical bearings of mineral metabolism in this paper.

## VITAMINES

In connection with the study of the mineral elements in nutrition, and of certain diseases, there has come to light in the past few years a group of dietary essentials which we handle by the name vitamins, though little is known as to their nature and virtually nothing as to their composition. They are contained in foods in such infinitesimal amounts, and are so unstable, that chemists have not yet been able to isolate them in pure form. By their works only do we know them.

Current opinion has it that there are certainly two and perhaps three substances of the sort which we designate vitamins; *one, the lack of which causes beriberi, and which is soluble in water and in alcohol, is called the water-soluble vitamin. A second, the lack of which may in time cause xerophthalmia, and which is soluble in fats and in alcohol, but not in ether or in chloroform, is called the fat-soluble vitamin. Both affect growth in a prominent way. A possible third is the principle in fresh fruits and vegetables which prevents scurvy. There is not yet unanimity of opinion as to whether this substance, if indeed it be a substance, is of the same nature as the fat-soluble and the water-soluble vitamins. For convenience, however, we shall refer to this principle as a third vitamin.*

## STUDIES IN THE VITAMINE THEORY OF DISEASE

Our knowledge of the vitamins owes its beginnings to a study of the disease beriberi, which has been known in the Orient for a very long time. This disease is characterized by spas-

\*Read before a meeting of the Union Medical Association at Wooster, Ohio.

modic rigidity of the lower limbs, muscular atrophy, paralysis, anemia and neuralgia. It is found principally among people who subsist largely upon rice. The first hint as to the cause of this disorder was obtained by C. Eijkman who reported in 1897<sup>(1)</sup> that in Java a polyneuritis of rice-fed poultry, which then appeared and has since been proven to be essentially the same as human beriberi, could be cured by the feeding of the silvery husk of the rice which is removed in the polishing process. The disease was caused by polished, but not by unpolished rice. This was our first evidence of the necessity in the diet of nutrients other than protein, fats, carbohydrates and salts. But this observation occasioned little comment or attention at the time.

Ten years later Fraser and Stanton<sup>(2)</sup> learned that the alcoholic extract of rice polish would cure experimental polyneuritis.

Another early clue was obtained by F. B. Hopkins<sup>(3)</sup> of Cambridge, Eng., who as early as 1906 learned that very small amounts of milk in the ration of mice made possible extensive growth which did not otherwise take place. He thereupon suggested the existence of unidentified food accessories in milk.

A related observation was made by Stepp in 1909<sup>(4)</sup> who determined that an alcohol-soluble constituent of bread made with milk was essential to the growth of mice.

In 1910, 1911 and 1912 Funk<sup>(5-13)</sup> made extended efforts to isolate the curative principle from rice polish, learned that a very few milligrams of his concentrated but impure preparation sufficed to cure polyneuritis in pigeons, promulgated the vitamine theory, and supplied the name by which these unidentified food essentials have since been known. Funk suggested that beriberi, scurvy, rickets, and pellagra are all vitamine deficiency diseases. The men who introduced us to this subject, then, were Eijkman, Hopkins, Fraser and Stanton, and Funk.

We shall pass over a great number of intermediate studies to our present understanding of the matter for which we are indebted to many workers, but especially to McCollum and his associates,<sup>(14)</sup> since they have contributed many details of information, and, by their analytical method of experimentation, first clearly differentiated between the fat-soluble and the water-soluble vitamins.

#### WATER-SOLUBLE VITAMINE AND SECRETINE

The water-soluble vitamine is very widely distributed. It is not known to be lacking in any diets which are widely used except those composed too largely of rice, white bread, or bolted corn meal. This principle is much more commonly present in abundance than is the fat-soluble vitamine.

It is especially abundant in yeast, liver, the germs of seeds, and in fresh fruits and vegetables; it is present in milk, but not in large

amounts; it is contained as an impurity in milk sugar; there may be slight loss, or no loss at all, in its efficiency, in the course of ordinary cooking; the loss is apt to be greater, and may be rapid, in the autoclave, at a temperature of 120 degrees Centigrade, especially in the presence of an alkali. Practically all common foods and all common dietaries contain a superabundance of this principle.

A recent paper by Voegtlin and Myers<sup>(15)</sup> throws a new light on this whole subject by the demonstration of so many similarities between the water-soluble vitamine and secretine, that substance in the body which regulates the secretion of bile and pancreatic juice, that it seems altogether likely they are one and the same substance. This is especially significant as suggesting the function of this vitamine in nutrition.

#### THE FAT-SOLUBLE VITAMINE

The fat-soluble vitamine is found in milk, butter, egg yolk, glandular organs, leafy vegetables, the germs of seeds, cod liver oil, and the so-called fatty fish such as herring. It is not associated in large amounts with the body fat or muscles of animals nor with the vegetable oils. It is scarce in energy storage tissue such as composes the bulk of the grains, roots and tubers. White flour is especially deficient. Nut margarine is practically free from this constituent. It is relatively abundant in cells possessing an intense metabolism. This vitamine is rather resistant to heat and is not readily destroyed in the process of cooking. Little work has been done with nuts; we do not know whether they are generally rich or poor in vitamins.

The first noticeable effect of lack of this essential in the dietary is failure to grow. Eventually a xerophthalmia develops; first a drying and wrinkling of the conjunctiva, then bluish-white spots, the conjunctiva becomes insensible, and necrosis sets in. Other cases exhibit photophobia and dacryorrhea.

In Japan this disease, which has appeared especially at times of food shortage, has been successfully treated, with unconscious conformity to our later knowledge of the vitamins, by the feeding of chicken liver, eel fat, certain species of fish and fish liver oils.

In Europe it has been reported among children as due to the use of skim milk instead of whole milk, and to the predominance of cereal foods and vegetable soup in the diet. These cases responded to treatment with whole milk and cod liver oil.

#### SCURVY

Scurvy, as caused by the restricted diet of stale foods on shipboard, has been known for centuries; and its ready response to treatment with oranges, lemons, potatoes and other fresh fruits and vegetables has been known for a very long time. It was common during the recent war



both in the armies and civilian populations of Europe. It is endemic in Russia. Infantile scurvy, however, which is common in the United States, has not been so thoroughly understood, and the recent development of methods of systematic dietary study by the use of small animals has made possible a large amount of fruitful work on this disorder. It is impossible for me to go into the literature in a thorough-going way, but I will mention a few of the important studies.

Theobald Smith<sup>(16)</sup> reported in 1895 that a diet of oats would cause a disease resembling scurvy in guinea pigs.

Holst<sup>(17)</sup> demonstrated in 1915 that guinea pig scurvy is the same as the human disease. He had earlier found that milk, unless it had been heated at too high a temperature, would cure this scurvy, as also would fresh cabbage, but that boiled or dried cabbage had lost most of this property.

E. D. W. Grieg<sup>(18)</sup> determined that the antiscorbutic value of grain was increased by sprouting; and that this property was lost by drying.

Delf<sup>(19)</sup> also found the antiscorbutic vitamin very sensitive to even a low degree of heat and drying, much more so than the fat-soluble vitamin.

W. H. Wilcox<sup>(20)</sup> reported that dates and raisins are antiscorbutic.

Harriette Chick<sup>(21)</sup> and associates found that guinea pig scurvy could be cured by fresh milk, and that this property of milk could be destroyed by heating at 120 degrees Centigrade for an hour. They found orange juice to be highly antiscorbutic, as also rutabaga turnip juice and carrot juice. Beets they found not to be antiscorbutic.

Harden and Zilva<sup>(22)</sup> found that lack of antiscorbutic vitamin resulted in restricted growth of rats; and Zilva and Wells<sup>(23)</sup> believe that tooth decay in man may be due to slight attacks of scurvy. In experiments with guinea pigs the teeth were found to be one of the first, if not the first part of the body to be affected by deficiency in antiscorbutic substances in the diet. The change begins in the odontoblastic cells at the top of the pulp, working downward toward the apex, followed by distended vessels and hemorrhage, and finally complete fibroid degeneration. The enamel grown on such a diet was imperfect and yellow.

Jackson and Moore<sup>(24)</sup> believe that scurvy is a bacterial disease, and claim to have caused a mild form of scurvy by injection of a diplococcus into animals.

McCollum and Pitz,<sup>(25)</sup> as a result of experiments with guinea pigs, believe that scurvy is caused by conditions arising from constipation, and that they were able to ward off scurvy for considerable periods of time, and in some cases to cure it, by the feeding of calcium phosphate, phenolphthalein, petrolatum, and artificial orange juice compounded from citric acid, cane sugar,

and salts. This view does not generally prevail, and other investigators have failed to confirm their results.

#### EFFECTIVE ANTISCORBUTICS

A very notable and fruitful series of studies on this subject has been made by Hess and Unger<sup>(26-31)</sup> in New York. These pediatricists say that it usually takes about six months for a case of infantile scurvy to reach a stage where it is clinically recognizable, and, therefore, that a great many latent cases must be saved from the development of acute symptoms by fortunate casual changes of diet.

They have determined that milk is not highly antiscorbutic; that it takes about a pint of fresh, raw cow's milk per day to protect a baby from scurvy; that scurvy is common among babies which do not receive enough milk, whether nursing or bottle fed, but especially those on a malt-soup diet; that fresh raw milk or boiled milk are better antiscorbutics than pasteurized milk; that raw milk loses its antiscorbutic power during storage and so should be used fresh; that the loss of antiscorbutic power in pasteurized milk occurs mostly during storage subsequent to pasteurization, and that the higher the temperature of pasteurization the greater is the subsequent loss of antiscorbutic efficiency during storage, apparently due to the killing of the acid producing and survival of the putrefactive bacteria; that the commercial drying of milk, as in the Merrell-Soule process, where the milk is quickly dried by spraying into hot air, does not destroy the antiscorbutic principle; that a baby fed on pasteurized milk needs an antiscorbutic from the time it is only a few weeks of age; that orange juice is an excellent antiscorbutic; that it may be boiled ten minutes without loss of this principle; that this compound is soluble in alcohol; that orange juice often causes babies less than a month old to regurgitate, but that this effect may be entirely prevented by neutralizing the acidity of the juice with normal sodium hydrate solution, the neutral point being determined by the marked deepening of the yellow color; that the antiscorbutic principle is present after the neutralization or removal of the acids; that sterile, neutral or slightly alkalinized orange juice may be satisfactorily introduced intravenously in critical cases; that potato is a useful antiscorbutic, but that prunes, bananas, cod liver oil and dried vegetables are not; that canned tomatoes are highly antiscorbutic, and that the juice may be fed to babies without the least trouble, a teaspoonful to a baby a few weeks old, an ounce to a baby a few months old, and four, six or even eight ounces may be fed to older babies without difficulty; and that the antiscorbutic principle in tomato is somewhat decreased by boiling but is not lost by neutralizing.

Those cases which develop to a recognizable point are characterized by stationary weight,

fretfulness, muddy complexion, rapid pulse and respiration, and slight oedema over the tibiae; as these cases advance there are scattered petechiae, tenderness of the bones and a hemorrhagic rim along the gums of the incisors.

#### RICKETS

Some attention has been given the subject of rickets in infants, in connection with the possibility of its being a deficiency disease. May Mellanby<sup>(32)</sup> believes, as a result of an experiment on puppies, that lack of the fat-soluble vitamine in the food is a factor in the production of this baffling disorder. She found that the lack of fat-soluble vitamine in the diet of these young dogs delayed the eruption of the permanent teeth, caused softness of the teeth, imperfect enamel, and irregularities in the position of the teeth. These difficulties were reported as curable by the use of cod liver oil and butter.

Asserson<sup>(33)</sup> also reports that he has found cod liver oil to be a protective against rickets.

Gastrointestinal intoxication has been much discussed as an etiological factor; and association with infectious disease receives frequent consideration.

The most significant work on this disorder remains the extensive series of studies by Schabad<sup>(34)</sup> the feature of which is the demonstration of the great therapeutic value of cod liver oil and phosphorus, combined.

While rickets is apparently a nutritional disease its relation to the diet remains obscure, and there is not satisfactory proof that it is due to lack of a vitamine.

#### PELLAGRA

Another disease which has been much discussed in connection with the vitamins is pellagra. This distressing affliction has been known among poorly nourished populations in central and southern Europe for some hundreds of years. Cases of what may have been pellagra were noted in the United States early in the nineteenth century. During the past twenty to thirty years its rapidly increasing prevalence, especially in the South, has commanded general attention. In 1917 it was estimated that there were 165,000 cases of pellagra in the United States.

Out of the voluminous discussion of the cause of pellagra one fact and another possibility have come to stand out with considerable clarity. Through the studies of Goldberger<sup>(35)</sup> and his associates it has become certain that the character of the diet is at least an important predisposing factor. The prevailing characteristics of the food of pellagrins are deficiency of protein, minerals and fat-soluble vitamine, and of the complete proteins of animal origin.

The conditions under which it occurs, more commonly than under others, are on diets composed mostly of such foods as corn bread, pork, and molasses, and at the end of winter. Gold-

berger says, "I have found it absolutely preventable by an appropriate diet." The liberal use of such animal foods as beef, milk, and eggs, and of such vegetables as string beans, cabbage, collards, and lettuce is said to cause the disappearance and prevent the recurrence of this disease.

That an infection also cuts a figure in the cause of this disease seems possible. It seems more likely that the nervous system would be affected by infection in such manner as to cause the striking bilateral symmetry often characteristic of the areas of skin involved than that this injury would be due to dietary deficiencies; but this is mere speculation. This disease has not been definitely related either to infection or to the lack of any single dietary essential.

#### MILK SECRETION AND VITAMINE

So far as is now known the vitamins are ultimately of vegetable origin. This fact has one of its most important bearings in relation to the secretion of milk. A vast amount of agricultural investigation has shown that the gross general composition of milk, as it is determined by chemical analysis, is not susceptible of modification in accord with the character of the ration, but remains characteristic of the species, of the breed, of the individual, and of the stage in the period of lactation. It is well known, however, that the character of the ration, especially the fat of its constituent feeds, has a limited but definite effect upon the character and composition of the fat of the milk; and the effect of the ration upon that constituent which gives to the butter its yellow color is also understood, through chemical study as well as common observation. It is also a matter of common knowledge that certain weeds eaten by cows impart characteristic flavors to the milk produced. In spite of our knowledge of these effects of feed on the composition of cow's milk, however, well-informed students of nutrition have been of the opinion that the nutritive value of milk remains unaffected by the diet of the mother, in other words,—that the interposition of her capacity to synthesize milk and to rob her body, in case of necessity, to provide constituents of the milk which are deficient or lacking in the food, constitutes a perfect measure of safety for the protection of the young. Recent observations seem to show that the inability of the animal organism to synthesize the vitamins may constitute a limiting factor in the ability of a mother to protect her young from certain inadequacies of the diet.

Andrews<sup>(36)</sup> determined experimentally that the milk of Filipino women whose infants had died from beriberi would cause the same disease in puppies, clearly through inability to synthesize the water-soluble vitamine, the lack of which in the mother's diet caused beriberi in the infants.

This observation is confirmed by McCollum and Simmonds<sup>(37)</sup> who determined by experi-



ments on rats that if the fat-soluble and water-soluble vitamins are deficient in the ration the mother can supply these from her own body, for a time, but that this capacity to make good the inadequacies of the diet is limited, and that, if the ration is continuously lacking in these essentials, the growth of the young will be unsatisfactory. McCollum found that when lactating rats were confined to an oat diet the greatest improvement in the growth of the young was produced by the addition of a mineral supplement, but that further improvement could be induced by the provision, in the form of butter fat, of the fat-soluble vitamin in which oats is deficient. Just how the mineral supplement improved the milk is not clear, since the mother animal has the ability to make very extensive drafts upon the minerals of her skeleton to produce minerals in her milk, and since exhaustive studies on milk secretion in cows have failed to reveal any consistent effect of the minerals of the ration upon the minerals of the milk.

The import of these observations, as they bear upon human nutrition, is clear, however. Milk secretion on a diet which is deficient in vitamins will draw upon, and may overdraw, the mother's reserves of these essentials, and in that case both mother and child will suffer.

*In Ohio it is now a penitentiary offense to overdraw your bank account. Is it less a crime to overdraw a mother's vitamin account?*

Diets composed from seed products, roots, tubers and meats are deficient in the fat-soluble vitamin and in calcium. The fat-soluble vitamins may be most readily provided in milk, butter, eggs, and leafy vegetable foods; the calcium may be most advantageously provided in milk, fruits and the leafy vegetables. The leafy foods have the further advantage of aiding in the elimination of wastes.

#### ANIMAL EXPERIMENT AND HUMAN NUTRITION

*In the application to practical human nutrition of the results of animal experiments in this field we may with profit ask two questions, the answers to which should establish an advantageous viewpoint; first, to what extent do the results of experiments with other animals really apply to human nutrition; and second, what shall be our basis for judgment as to correct dietary habits?*

As to the applicability of the results of animal experiments to human nutrition, there are certain facts which one should understand; thus, the different species of animals differ enormously among themselves and as compared with human beings in their susceptibility and reactions to poisons, either as contained in natural foods or in the shape of drugs; they also differ greatly in their requirement for water, some small mammals being able to live without other supply of water than that obtained from the oxidation of carbohydrates within their tissues; ruminants have certain special dietary requirements, as also

do carnivora as compared with herbivora; and all of the animals used for nutrition experiments differ markedly from human beings in that they are characterized by a very much greater impulse to grow, so that all factors of the ration which determine growth in the laboratory animals affect human beings less prominently, for the simple reason that with human beings growth is a much smaller part of the total metabolism; and proportions of skeleton to muscle and of muscle to fat, as these differ in human beings and the animals used for experimentation, have bearings on the significance of certain facts relating to the dietary. There is, therefore, considerable difference in proportion of factors, in emphasis, in the metabolism of the animals which we are wont to compare, but the nutritive requirements of all animals are essentially very much alike and the more fundamental the consideration the more nearly are they the same.

And now for the second question; the ideal relation of man to his diet is surely one of perfect adaptation of means to ends, and it is most natural to assume that in the course of the uncounted ages of the evolution of man as an animal there has come to exist an approximately perfect harmony between food habits and nutritive requirements. Comparatively speaking, the development of mankind from our prehuman ancestors has consumed but a moment in our history as animals,—a protracted moment, if you please, in the course of which the development of agriculture, manufacture and transportation have made possible almost unlimited freedom for changes of food habit, to suit our every preference and fancy, without the lapse of time sufficient for any considerable modification of inherited nutritive requirements. It is my belief, then, that the real food requirements of man today, in the sense of being those which he inherits, much more nearly reflect the food habits of his higher animal ancestors than of civilized human beings.

If, as the zoölogist tells us, ontogeny recapitulates phylogeny it is not far back the way which man has come that he lived mostly in the tree-tops. In those days, considering the possibilities of his situation and the habits of arboreal apes of this day, his dietary must have consisted of fruits, nuts and smaller seeds, succulent tubers, roots and shoots, bird's eggs, young birds, and insects.

The point is this,—the present predominance of meat, cereals, and sugar in the diet has been possible only since man became a hunter and a farmer; and it seems impossible that his inherited food requirements should have kept pace with these comparatively recent changes of food habit. Well, what does this signify in the present discussion? It simply means that with the partial replacement of nuts, fruits and leafy vegetable food by cereals, sugar and meats we have impoverished our diet in calcium and in

the fat-soluble vitamine, for both meat and cereals are very low in these two dietary essentials, and sugar of course contains neither.

#### MILK AND CALCIUM DEFICIENCY

A careful analysis of the situation as regards calcium in foods eaten by human beings reveals the fact that so many of them are poor in this element and so few of them are rich, and so many dietaries are on the ragged edge of calcium insufficiency, as to suggest that this has been a limiting factor in the physical development of human beings, and that man's phenomenal slowness in attaining full growth may have been conditioned in part by this characteristic of his diet.

The one food which is best constituted to supply the prevailing lack of calcium and of fat-soluble vitamine in the human ration is milk. But can milk be regarded as a natural food for an adult human being? No, certainly not, but neither are the prevailing proportions of cereal, sugar and meat natural in the sense of being characteristic of the aboriginal food habit, and one unnatural dietary factor may be employed to counterbalance another. Milk is more nearly a complete and perfect food than any other, and is the most efficient dietary protective factor in existence.

Eggs also are very rich in fat-soluble vitamine, and contain considerable calcium, but not nearly so much as milk. Glandular organs, such as liver and pancreas are also rich in fat-soluble vitamine.

The leafy vegetable foods are useful sources of calcium, of fat-soluble vitamine, and also of iron, which many dietaries lack, but the extent of their usefulness in the human diet is limited by their bulky, fibrous nature, their low protein content, and further,—the limitation which applies to all vegetable foods,—their proteins are not so valuable for animal nutrition as are the complete proteins of milk, meat and eggs.

#### VITAMINES NECESSARY FOR HEALTH

Now as to the practical significance of this whole subject, is its greatest importance as it is related to beriberi, xerophthalmia, and scurvy? Most assuredly not. To appreciate these disorders of nutrition in a true light let us compare them with infectious diseases. These you *have*, or else you have them not; but the diseases of nutrition become recognizable only when conditions become desperate, when the great complications of safety provisions with which we are equipped have proven inadequate, and when dissolution threatens. By far the most important bearing of the facts as to the vitamins is in relation to growth, efficiency, general tone and resistance. The lack of them is especially apt to develop during periods of stress, as in pregnancy, lactation, and infectious disease.

A diet may be varied and palatable, and may contain an abundance of protein, carbohydrates,

fats and mineral nutrients and still be dangerously inadequate; and it is in the slight and unrecognized departures from the normal that these dietary deficiencies must work their greatest injury. The presence in the food of all three of the food accessories or vitamins in adequate amounts is necessary to the optimum state of nutrition.

To prevent shortage of the water-soluble vitamine in the diet avoid an undue preponderance of cereal products which lack the germs of the grains.

To avoid deficiency of the fat-soluble vitamine make liberal use of milk and milk products, eggs and leafy vegetable foods.

To guard against lack of the antiscorbutic vitamine in the diet of the infant give some vegetable food, but especially orange or cooked tomato juice, at an early age; and in later life make liberal use of fresh fruits and vegetables.

In the present state of our knowledge it is impossible to say in an exact way what should be the proportions of the different kinds of foods in the composition of the dietary; and so little study has been made of nuts that we do not know how they generally compare with other foods as to vitamine content.

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## Treatment of the Average Case of Weak Feet

Gordon N. Morrill, M. D., F. A. C. S., Cleveland

**Editor's Note.**—According to Dr. Morrill there is a great deal of misconception about the condition ordinarily diagnosed as flat-foot, and treated by the use of so-called arches. Dr. Morrill contends that what people need today is not an artificial support for weak feet, but an educational campaign to enable them to understand the structure of their feet, the correct way to walk and stand on them, and the proper shoes with which to protect them. Nothing permanent can be accomplished to this end until the idea of the necessity for self-correction is definitely established in the mind of both physician and patient. In treating the average case of weak feet it is essential to teach the patient the proper posture for standing and walking as well as indicating the proper sort of shoes and a few simple exercises. Aside from this, strapping with adhesive tape will accomplish far more permanent and remedial results than support by rigid or semi-rigid metal arches.

**T**HERE seems to be a somewhat general misapprehension, even in the medical profession, as to the causes and most efficient means of correcting *so-called flat-foot*. The prevalence of plates as the principal agent in the treatment of these cases by well-intentioned, but mistaken physicians everywhere is one proof of this misapprehension. It may be regarded, also, as a partial explanation of the increasing numbers of sufferers from the malady. What people need today is not an artificial support for weak feet, but an educational campaign to enable them to understand the structure of their feet, the correct way to walk and stand on them, and the proper shoes with which to protect them. Nothing permanent can be accomplished to this end until the idea of the *necessity for self-correction* is definitely established in the mind, *both of physician and patient*. And that is the most important single statement which can be made on the subject.

Throughout the following discussion it should be clearly understood that we are referring here to the average case of flat-foot which the physician meets in his practice—that is, in which there is either pronation or abduction, or both, usually resulting in depression of the longitudinal arch; we shall not discuss the *rigid type*, which is in most cases congenital, complicated by long-standing deformity, or due to chronic rheumatism.

### COMMON CAUSES OF FLAT-FEET

Naturally, as a preliminary to this campaign of enlightenment among your patients, they should be given a clear exposition of the commonest causes of weak feet. The first of these,—the most general, and therefore the most difficult to combat—is a faulty attitude, the habitual *toeing out* of past as well as present generations. Not only do mothers and teachers make this mistake in training children, but our army officials, in spite of appalling numbers of men having been excluded from active participation in the war because of fallen arches, nevertheless insisted that the army stand at attention with toes turned out! A second and scarcely less deplorable cause, is our modern fashion in shoes. The pointed toes, high heels, and generally abnormal lines of the shoes most people wear cramp and distort the foot, forcing it, by the position in which it is held, to turn out even if its natural inclination is to the normal. These, complicated perhaps by vocational, or occasional physical conditions, will suffice to cover the general causes of weak feet.

### NORMAL STRUCTURES OF FLAT ARCHES

The structure of the foot, and the effect upon it of misplacing the body weight, cannot be so summarily dealt with. The foot is for convenience divided longitudinally into two groups of bones which are usually referred to as arches,—an inner and an outer. Of these the outer is the



Figures 1-2. (1) Roentgenogram showing foot in normal attitude. (2) Foot seen in Figure 1, showing the effect of pronation on the relative position of the bones. Note particularly the astragalus and os calcis in comparison with their normal position.



Figures 3-7. (3) The left foot is in the correct position, with the line of weight bearing falling as it should. The right foot shows pronation occurring with the feet parallel. The line of weight bearing therefore falls improperly as indicated. (4) Showing the line of weight bearing when both pronation and abduction occur. The left foot is shown in the correct position. (5) The desired overcorrection is secured by turning the foot inward until the metatarsophalangeal joints in flexion and extension are at right angles to the line of walk. (6-7) The application of the adhesive strapping, which acts as a reminder, not as a prop.

stronger as it is longer and lower, and therefore constructed to bear more of the body weight. It sinks slightly when the weight is borne upon the foot, making an imprint through its entire length. The inner of these longitudinal arches is higher, more flexible, and should curve slightly outward at its highest point, the juncture of the astragalus and scaphoid. Normally, it flattens very little when the body weight is upon it, the imprint of the foot showing only the heel, the outer arch, the metatarsophalangeal joints and the balls of the toes. Of these the principal weight-bearing elements are the metatarsophalangeal joints and the os calcis.

The entire foot is supported by muscles and ligaments which give elasticity to the step as the arches depress under the body weight. But if this weight is misplaced—that is, if the foot is turned outward in walking or the leg rotated inward—undue strain is exerted upon this inner weaker arch, the ligaments expand, allowing the tibia to rotate on the astragalus, twisting it, and depressing it and the bones forming the arch, and forcing the os calcis to turn inward and downward. (Figs. 1 and 2.)

If this attitude is persisted in, there is inevitably a noticeable deformity, and more or less pain, the degree depending upon the former strength of the ligaments and the amount of superincumbent weight. In some cases it may become so severe as to induce sciatica (which, it should be understood, is always a symptom, never a diagnosis.) When pain is present, there is an unconscious endeavor on the part of the patient to ease the strain on the feet by tilting the pelvis slightly backward, or, occasionally, forward; and thus the balance of the body is disturbed, the elasticity of the step is lost, the gait and attitude become awkward,—in short, the entire bearing loses its normal poise.

#### TEACHING CORRECT POSTURE

Having presented to your patient somewhat in this manner the structural and functional pe-

culiarities of the foot and the results of using it in malposition, obviously the next step is to demonstrate the correct position and the simplest way to attain it. The foot is only in the normal attitude when the line of weight bearing passes through the center of the knee and ankle joints to the inner side of the second toe (Fig. 3). For the benefit of any who may be of the opinion that if the feet are placed parallel in walking they are certain to be in the normal attitude, let me add that pronation may, and frequently does, occur in this as in the abducted position (Figs. 3 and 4.) The only positive proof of perfect correction is the line of weight bearing passing through the points indicated in Figure 3. However, to secure this normal result in your patient who habitually assumes a faulty attitude, it is necessary so to exaggerate the correction that, when walking, the feet turn slightly inward,—until the metatarsophalangeal joints, in flexion and extension, are at right angles to the line of walk (Fig. 5.) When the knee is flexed, it will then fall over the head of the fifth metatarsal. To those patients in whom the deformity has been of long duration this will seem difficult to accomplish, owing to the resultant contraction of the external lateral ligaments and perineal muscles. *A simple exercise which is of benefit in these, as in all cases of depressed arches, consists in standing with the feet parallel and about four inches apart, and rolling onto their outer sides. It should be repeated several times a day until the desired stretching of muscles and ligaments has been accomplished.*

#### MECHANICAL AID

Your patient has, thus far, been given only those facts necessary to the part he personally must take in effecting his cure. There are two ways of assisting him in his task, without committing the vital error of furnishing him with artificial braces or props: The first, by supervising his choice of a shoe,—making certain that it is built on the normal lines of the foot, and that it



is a *low shoe*. If a high, tightly laced model is worn, the top acts as a splint, and your first purpose, that of permanent self-correction, is defeated. The heel should be broad, not more than three-quarters of an inch high, and, in order to insure an over-corrected position, an additional lift of a quarter of an inch on the inner edge, tapering to nothing on the outer, should be applied. It is a rather general custom to build up the inner side of the sole as well as of the heel,—one which should be absolutely discontinued. If the lift is added to both heel and sole, the angle of the inner arch is unchanged. But a little thought and experiment will demonstrate that the arch is higher, and the over-correction, therefore, will be much more certain of attainment, if the heel alone is raised.

The second means of aiding the patient in his task, is the application of adhesive strapping by the physician, renewed twice a week in order to take advantage of any improvement which may have been achieved in the interval. With the foot held in a somewhat over-corrected position, the strapping is attached just below the external malleolus, drawn firmly under the arch, over the ankle, and more than half-way up the out side of the leg (Figs. 6 and 7.) Three strips of adhesive tape are used, the first two slightly overlapping one another, the third running midway

upon the others and pulled tighter than they to prevent their edges from cutting. It is then impossible for the patient to toe out without sharp discomfort from the firmly attached tape, which plays most effectually its role of reminder, but in no sense can be considered a prop. When removing the strapping, benzine dropped between tape and skin releases it quickly and painlessly.

If physicians will follow these general indications in the treatment of weak feet, and, more important still, if they can persuade their patients to follow them, there is no doubt that the average case of flat-foot can be cured in a month or even less, although attention to the attitude and shoes should never be relaxed.

Perhaps in time we can convince the public of the importance of intelligent supervision and careful guidance in forming the habitual attitude, and in buying the shoes, of the growing child. Meanwhile, if we use our best efforts in dealing with the malady, securing the co-operation of our patients in obeying commonsense rules by making clear the disastrous results of breaking them, we shall do much to check this wide-spread affliction, the seriousness of which, in its effects on personal efficiency, is apparently so little understood.

1021 PROSPECT AVENUE.

## Schenck-Beck Improved Tonsil Snare\*

W. Edwards Schenck, M. D., F. A. C. S., Cincinnati

**T**HERE have been numerous efforts to devise instruments or methods for the complete removal of tonsils with a minimum amount of hemorrhage and injury to the soft parts,—the anterior and posterior pillars. Each effort has usually effected some improvement and this is my excuse for presenting an improved tonsil snare, which I am inclined to presume obviates many of the disadvantages of former instruments.

Dr. Joseph Beck and the writer devised a snare approximately along the same lines at about the

name. But we are not all as fortunate or clever as Dr. Beck, hence in improving my instrument I have endeavored to make it accomplish for all of us the cleverness of Dr. Beck.

By changing the position of the fenestrum to that at right angles (horizontal) to the finger rings of the carriage, I have secured more fulcrum power than the side wrist force of the usual snare,—in other words in the new instrument we have an action similar to that exerted with the Sluder tonsillectome.

### DESCRIPTION OF THE NEW SNARE.

The Fenestrum, (1), is removable and of different sizes; and is attached to a strong handle by means of a collar (notched for two angles, horizontal and perpendicular), with a spring release that allows quick removal and the replacing of different size loops. The advantage of this is that it permits the wire to properly engage the tissue at the base of the tonsil without kinking.

The Canula, (2), is attached to the carriage and its ends come flush with the fenestrum to allow the easy threading of the wire, which is firmly held by a thumb-screw (3), in the right side of the carriage. The advantage of this is that it prevents the kinking of the wire and you can use the same wire for the removal of several

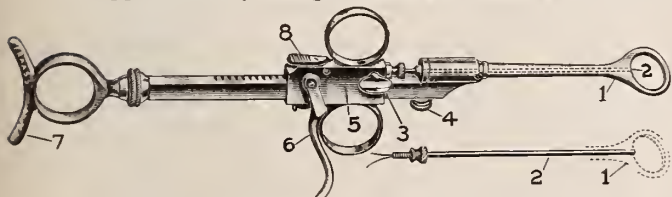


Figure 1. The Schenck-Beck improved tonsil snare.

same time, and we have both at different times improved our instruments, so that the instrument herewith presented is my latest effort to perfect the tonsil snare.

Dr. Beck is so dexterous with his hands that with his instrument he can remove a tonsil as Dr. Sluder does with the instrument bearing his

\* Read before the Academy of Medicine of Cincinnati.

tonsils or replace it with a new wire in a minute.

The Spring-Release, (4), is connected at the bottom of the handle Collar with a milled screw, by releasing which two turns and pressing up, the Canula is released from the groove in the fenestrum shaft for its removal.

The Carriage, (5), has a spring that forces a dog into the notches in the handle so that the wire remains engaged in the tonsil, even though the hand is disengaged from the instrument. It

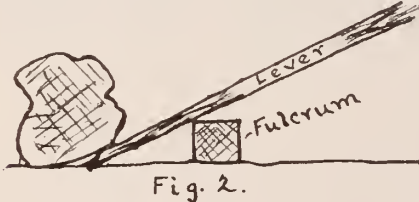


Figure 2. Schematic representation of lever and fulcrum action.

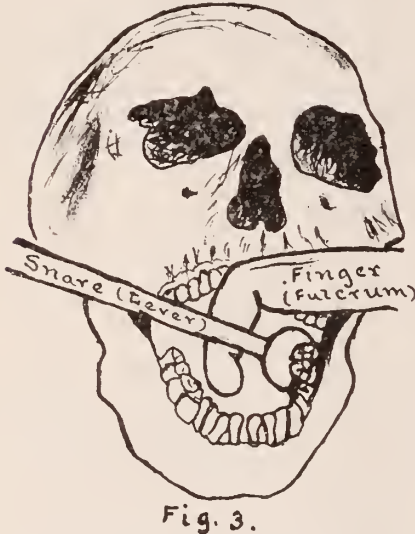


Figure 3. Showing the use of the snare as the lever, the finger as the fulcrum.

likewise allows the gradual crushing of the tonsil, as slowly as the operator desires. The more slowly the tonsil is removed the less danger of bleeding. If the tonsil should be firmer than the finger pressure can overcome, pull Lever (6), below the carriage backward and thus engage the ecrasure and finish the operation by slowly turning the Thumb Ring, (7), to the right. You can readily gauge your speed because the notched handle gives a click with the progress of the carriage past each notch.

To release the carriage move Lever, (6), forward and press the Small Lever, (8), on top of the carriage down, which releases the notch-dog and allows the carriage to slide forward. The instrument comes apart for sterilizing and drying.

#### TECHNIQUE OF TONSIL REMOVAL

Dissect the pillars free from the tonsil. Pass the snare backward from the opposite side of the

mouth, engaging the tonsil in the fenestrum. Force is applied behind and below the tonsil and then the tonsil is pulled forward and upward and about  $\frac{3}{4}$  of an inch against the alveolar eminence of the lower jaw. With the other hand (or you can use rat-tooth forceps), thoroughly engage the tonsil into the fenestrum (Wendell Phillips)<sup>1</sup> and hold it so engaged with the index finger making a fulcrum action (Fig. 2 and Fig. 3) while the wire is drawn taught, then slowly remove the tonsil.

With the different modifications of the McKenzie tonsillotome there is always danger of injuring the anterior pillar, because you cut from before backward; while with the snare that is impossible because you sever the tonsil from behind forward. Hence with this fenestrum snare the wire will enter the tonsil at the place where the fenestrum is placed, namely at the base of the tonsil. There will be no laceration of the soft parts, while the uvula will be protected from being snared and there will be very little bleeding.

With this instrument you can use also either the Beck or Sluder technique.

19 W. SEVENTH ST.

<sup>1</sup> Diseases of the Ear, Nose and Throat, Wendell Phillips, 1915.

#### BOOKS RECEIVED

*Handbook of Diseases of the Rectum*, by Louis J. Hirschman, M. D., F. A. C. S. Vice-chairman, Section on Gastro-Enterology and Proctology, A. M. A.; ex-president of American Proctologic Society; professor of Proctology, Detroit College of Medicine; Proctologist, Harper Hospital; Major M. C., U. S. A. (honorably discharged) Detroit, U. S. A. With 223 illustrations mostly original, and four colored plates. Third edition revised and rewritten. Price \$5.00. The C. V. Mosby Company, St. Louis.

*Personal Beauty and Racial Betterment*, by Knight Dunlap, professor of experimental psychology in the Johns Hopkins University. Price \$1.00. The C. V. Mosby Company, St. Louis.

*Sex Attraction*, a lecture given at the Michigan State Normal School, July, 1919, by Victor C. Vaughan, M. D., LL.D., Professor of Hygiene and Physiological Chemistry, and Dean of the University of Michigan Medical School, Ann Arbor, Michigan. Price 50 cents. The C. V. Mosby Company, St. Louis, Mo.

*Arteriosclerosis and Hypertension*, with Chapters on Blood Pressure, by Louis M. Warfield, A. B., M. D. (Johns Hopkins), F. A. C. P., formerly professor of Clinical Medicine, Marquette University Medical School; chief physician to Milwaukee County Hospital. Third edition. The C. V. Mosby Company, St. Louis. Price \$4.00.

*The Old Doctor's Vision, and Other Poems*, by T. J. Savage, M. D., Xenia, Ohio. Price \$2.00.



# Intussusception in Infants with a Report of Five Cases

J. W. Epstein, M. D., Cleveland

**Editor's Note.**—As intussusception may be readily confused with other gastrointestinal conditions in infants, especially so-called summer complaint, it is interesting to realize the frequency with which Dr. Epstein encountered this serious condition when it was otherwise diagnosed. The differential diagnosis from a follicular-enteritis, the only other form of gastro-enteritis where blood is present in the stools, should present no difficulty according to Dr. Epstein. The presence of shock, a normal or sub-normal temperature, absence of stools, a palpable tumor, and a mass on rectal examination will establish the diagnosis of intussusception with certainty, while in follicular-enteritis the blood is scarce, just enough to give the mucus a bloody tint, there is no shock, no palpable tumor mass, high fever is present and the stools, on microscopic examination, reveal the presence of pus cells.

**I**NTUSSUSCEPTION, being relatively uncommon as compared with other gastrointestinal diseases which occur in infancy, is often confused with the more frequent manifestation of such disturbances, especially with follicular enteritis. The acute onset, the symptoms of vomiting, bloody stools, abdominal pains and toxicity, are common to both conditions and one is therefore, easily misled to pronounce the diagnosis of follicular enteritis or intestinal intoxication, unless a few differential points are taken into consideration. I want to cite five cases, all of which came to me from one to four days after the inception of trouble, during which time these cases were treated for summer complaint or the like.

## ILLUSTRATIVE CASE REPORTS

Baby P. G., age six months, breast-fed, weighed seventeen pounds, took sick suddenly with vomiting on Sunday in February, 1917. On the following morning the vomiting increased, with severe cramps and blood in the stools. A physician was called who diagnosed the case as enteritis and treated it with bismuth internally and starch enemas. On Wednesday I examined the baby. The napkin showed that the bowel movement consisted of blood without any fecal matter. On rectal examination a mass was found, and the diagnosis of intussusception was made. It was impossible to palpate the mass through the abdominal wall because of the extreme rigidity present. The child was taken to Mt. Sinai Hospital. On operation the bowels were found distended and a large tumor mass consisting of the transverse and descending colon was found in the pelvis. The intussusception was reduced. Recovery followed the operation.

Baby E. M., age eight months, breast-fed with supplementary feeding of milk and water. Mother gave the history that the child had been taken sick with vomiting, colic, and frequent stools consisting of blood and mucus. Case came to my office in June, 1918, only a few hours after the first diagnosis had been made, I found a definite sausage-shaped abdominal mass two and one-half inches in length, one and one-half inch in diameter. In the rectum a mass was palpable, whose lumen admitted the tip of finger. Upon

removal of examining finger a great deal of bloody fluid escaped. The child was referred to Mt. Sinai Hospital. On operation a large tumor mass was found consisting of descending colon, being telescoped into the sigmoid. Child was on the way to recovery but ten days after the operation a hernia of the entire intestinal tract developed and the child died following secondary operation.

Baby C. C., age four months, weight ten pounds, breast-fed previously healthy. Mother came to office stating that baby had had summer complaint for the last twenty-four hours. Family physician had seen the baby in the morning, and diagnosed the condition as being summer complaint. Napkin was found soiled with blood but with no fecal matter. On examination a sausage-shaped mass was found in left lower abdomen, and the same mass was palpable in rectum. Child was operated at Mt. Sinai Hospital on the same day. The intussusception consisted of ileum, caecum appendix and entire colon. The intussusception was reduced. Child died two days later. It is important to point out that in this family another child died of intussusception.

Baby J. K., age four months. Seen in August, 1916, after child had been ill for three days. Mother stated that the baby had had vomiting, diarrhea and bloody stools for three days. The baby was never breast-fed, but fed on malted milk. The onset of sickness was abrupt, with colic and vomiting, bloody stools appearing the following day. A physician was consulted who diagnosed the case as summer complaint due to malted milk. He discontinued malted milk and advised the use of certified milk instead. On examination the child was moribund, abdomen distended and rigid, a big tumor mass prolapsing from the rectum. On close questioning the mother admitted that there had been no stools for the last few days, but that the movements consisted of pure blood without any fecal matter. It was a plain case of intussusception. The baby died a few hours later.

Baby I. M., age seven, breast-fed. Patient took sick on September 21st, with vomiting. Physician ordered castor-oil. The child was slightly improved the next day, but grew worse towards the evening, when blood appeared in the

stools. On examination rectal temperature was 98° F. There was a palpable mass in left lower abdomen and the same mass was felt through the rectum, there was blood but no stools. Baby was operated at Mt. Sinai Hospital and it was found that the caecum, appendix and ileum were telescoped into the large bowel as far as the sigmoid flexure. The mass was reduced and patient made a good recovery.

#### SUMMARY

To sum up, four of the above cases occurred during the summer months when every physician is called to treat children for various gastric disorders. The season of the year and the acute onset resembling that of gastro-intestinal disorders is prone to distract the physician's mind from the possibility of an intussusception. In all of my cases, the alarming symptoms that induced the mother to seek medical advice was the hemorrhage from the rectum, a symptom of sufficiently grave importance to warrant the elimination of a possible intussusception. The

differential diagnosis from a follicular enteritis, the only form of gastro-enteritis where blood is present in the stools, should present no difficulty. The presence of shock, a normal or subnormal temperature, absence of stools, a palpable tumor, and a mass on rectal examination will establish the diagnosis of intussusception with certainty, while in follicular enteritis the blood is scarce, just enough to give the mucus a bloody tint, there is no shock, no tumor mass palpable, high fever is present, and the stools on microscopic examination reveal the presence of pus cells.

It would seem that in every case with a history of blood in the stools a rectal examination should be made for the purpose of either establishing or eliminating a diagnosis of intussusception; and further, it would seem necessary that the napekin should be examined by the physician to determine whether there are stools present with blood or pure blood only. The statement of the mother is not always reliable.

10604 DREXEL AVE.

## Report of a Case of Sodium Nitrite Poisoning

Symmes F. Oliver, M. D., Cincinnati

Editor's Note.—It is quite remarkable how occasionally individuals will take poison with their meals and not become conscious of any ill effects for some time later. The Editor recalls a case in which a carpenter, after a heavy meal, swallowed several ounces of camphorated oil in a glass of beer thinking he was taking castor oil. If Merck's Manual had not been available for consultation as to a remedy the Editor would have been utterly at a loss as to the use of proper antidotes. Rare cases of poisoning should be reported for the benefit of those who may encounter similar instances in their practice. It is fortunate in these cases if the nature of the poison can be learned definitely and does not have to be guessed at from the symptoms of the patient. Dr. Oliver in his excellent report enters into a discussion of many phases of sodium nitrite pharmacology, aside from the results of its accidental use in poisonous dosage. Perhaps the most prevalent form of nitrite poisoning is that chronic form associated with the anilin dye industry, the chief symptoms of which are headache, cyanosis, low blood pressure, hemoglobinuria and severe secondary anemia.

**T**HROUGH the kindness and courtesy of Dr. R. S. Morris, on whose service at the Cincinnati General Hospital this case appeared, I am privileged to make the following report:

#### SOME PHARMACOLOGICAL AND BOTANICAL CONSIDERATIONS

The nitrite group of drugs has long been known and employed therapeutically by the medical profession. Early researches established their action and uses medically and they have been given with gratifying results, especially in the so-called cardiac diseases associated with high blood-pressure. Perhaps their most common usage has been in the relief of cardio-spasm such as is seen in angina pectoris. As a means of lowering blood pressure the nitrites have been of distinct value. Their use in chronic interstitial nephritis, so called uraemic states, arteriosclerosis, cerebral hemorrhage, and allied disorders is so familiar to us all that it need only

to be mentioned in passing. The close relationship between certain types of convulsions and blood pressure, as shown so clearly by the researches of Dr. D. Ervin, makes these drugs stand paramount as aids in controlling and preventing such convulsive disorders. *Veratrum viride* has also been used with success especially in the convulsions associated with eclamptic, uraemic and diabetic comas. Its value, likewise, probably lies in its effect in reducing the blood-pressure. The therapeutic employment of these drugs, however, is too well known to do more than touch upon in this paper. A knowledge of the toxic effects of a drug so commonly used should be of value and it is the object of this communication to report such manifestations seen in a case of sodium nitrite poisoning.

Before entering into a description of the above mentioned case, it should prove instructive to discuss the sources and commercial uses of this drug. Accidental poisoning appears all the more remarkable when its commercial uses are so



limited and the amounts employed so small. Nitrites are found free in nature in minute quantities in certain waters, traces are found also in the human saliva. It is an important secondary product in the conversion of the nitrogen of the air into nitrates by leguminous plants through the aid of certain nitrogen "fixing" and transforming bacteria residing in the tubercles of the rootlets of these plants. An excellent example of this is seen in the nitrogen cycle which takes place in the tubercles and roots of the soy bean and pea. This interesting and highly useful process of utilization of the free nitrogen of the air, is of tremendous importance to the agriculturist as it is by this method that he is able to prevent the nitrogenous depletion of the soil. An illuminating and instructive contribution to the study of these bacteria is given in the researches of A. Bonazzi.<sup>5</sup>

#### POISONING BY FERTILIZER AND IN THE INDUSTRIES

Sodium nitrite has only a rather limited use commercially. It is used in laboratories chiefly as a reducing agent. In photography small quantities are employed in the reduction of silver. It fulfills a similar role in the manufacture of certain of the anilin dyes of commerce. Medically, its use as a remedial agent has been previously mentioned. The fertilizers of commerce, which are composed largely of sodium nitrate, also contain, frequently, appreciable quantities of the nitrites due to the reduction of the nitric salt. It is of interest in this connection that Barth<sup>1</sup> in 1883, called attention to the poisoning of cattle by  $\text{Na NO}_2$  due to the presence of fertilizer in their fodder. The symptoms occurring in these animals were practically identical with the toxic manifestations in man. The symptoms briefly noted in animals are as follows:

- (1) Drowsiness and giddiness.
- (2) Primary elevation of temperature, followed by a secondary fall.
- (3) Fibrillar contractions of the muscles.
- (4) Deep, labored respirations.
- (5) Vomiting and yawning (in dogs).
- (6) Browning of the color of the blood (due to the formation of methaemaglobin).
- (7) Occasional paralyses.
- (8) Death without spasm or convulsions.
- (10) Accompanying the above, of course, there occurs a marked fall in blood-pressure.

It is because of the inaccessibility of this substance and its almost negligible use commercially that accidental poisoning seems so remarkable.

Among certain of the anilin dye workers of Germany a chronic form of nitrite poisoning has been noted. The chief symptoms herein described are headache, cyanosis, low blood-pressure, haemoglobinuria and a rather severe secondary anemia.

Sinegar<sup>3</sup> reports the case of an infant that died

as a result of nitrite poisoning due to the use of a mistaken prescription.

Gordon Sharp<sup>2</sup> in 1894, describes a non-fatal poisoning case.

Gibson<sup>5</sup> warns of the alarming symptoms that occasionally follow its therapeutic administration.

Ringer<sup>4</sup> and Murrell<sup>1</sup> early noted its toxic properties when pushed beyond the therapeutic dosage.

Of all the cases above noted, however, the toxic substance used was known and the symptoms followed its therapeutic use. The case here presented, as will be readily seen from the following description, offered a much more difficult problem and, because of its extreme rarity, was not at once recognized.

#### CASE REPORT

An unknown white man, approximately 40 years of age, was admitted to the ward, June 12, 1919, at 10:30 P. M. He was comatose, dyspnoeic, intensely cyanotic and his skin was bathed in a profuse, cold perspiration. Previous to his admission to the Medical ward, he had been given a gastric lavage as it was suspected that he had taken poison. There were spasmodic twitchings of the arms and hands and convulsive contractions of the jaws. During these attacks he crunched his teeth and it was impossible to separate his jaws. His breathing was very stertorous and irregular. There were periods of apnoea lasting for from 15 to 20 seconds, followed by irregular, violent, noisy and forceful respirations. The pulse was large, dicrotic and regular and of fair tension. No history, of course, was obtainable at this time but a preliminary physical examination was made. Temperature on admission 98.2°.

The pupils of his eyes were about 2 m.m. in diameter and did not react to light.

There were no abnormal findings in the chest. The lungs were clear throughout. No adventitious sounds. The transverse diameter of the heart was not increased and the heart sounds were strong and clear. The examination of the abdomen revealed no abnormal signs. Extremities negative.

The patient was given an intravenous injection of Fischer's solution (500 c.c.). Because of the extreme cyanosis the administration of oxygen was started at 11 P. M.

He was seen at 12:30 (midnight) and his condition seemed somewhat improved, although he still remained comatose. The cyanosis was less marked and the convulsive attacks were practically checked. The respiration was still very labored and irregular, but his pulse remained good throughout. Temperature was slightly elevated (99.2°). It is to be regretted that no blood-pressure determinations were made at this time, as the nature of the poison was not known.

The next morning his condition was complete-

ly changed. There was still some cyanosis of the lips and ears but his color otherwise was good. The patient was breathing quietly and perfectly conscious. The following history was then obtained from him.

He said that he found a jar of what he supposed was table salt and that he took it to his home. He ate 6 or 8 radishes for supper and dipped them into the salt above mentioned. He said that it tasted like salt and he thought nothing of it. He also had two cheese sandwiches, three meat sandwiches and some beer. He took no medicine of any kind. Ten or fifteen minutes after eating he became dizzy. He then went to a saloon to get some beer. While he was sitting on a bench with some friends they noticed that his face began to "color up." They became frightened and called a patrol wagon. He remembers reaching the hospital (Receiving ward) but recalls nothing further until early the following morning. The patient states that he knows of no one else who was taken sick. He states that he sent one of his friends back to his boarding house to get the "salt" as he evidently

suspected that it caused his trouble. We obtained the "salt" from the Receiving Ward and immediately had it analyzed by Dr. Ervin, of the Pathologic Institute. He later reported that the substance was Sodium nitrite.

A thorough physical examination was then made but the findings were negative except for evidences of cerebro-spinal-lues. A blood-pressure reading was taken and noted as follows:

Systolic Pressure..... 98  
Diastolic ..... 60  
Urinalysis—negative.

The family and past history are not given here as they were irrelevant.

The patient remained perfectly well and was discharged from the hospital on June 17, 1919.

THE BERKSHIRE.

#### REFERENCE

1. Barth: The Practitioner, 1883, P. 181.
2. Sharp: The Practitioner, 1894, P. 345.
3. Sinegar: London Lancet, 1917, Vol. 11, P. 162.
4. Murrell: London Lancet, 1883, Vol. 11, Nov. 3rd.
5. Ringer:
6. Gibson: Diseases of Heart and Aorta.
6. Bonazzi: Journal Exp. Med., July, 1919.

## OHIO PUBLIC HEALTH NOTES

The week of May 16 was observed as Child's Welfare Week in Canton. Throughout the week Dr. Charles W. East, chief of the division of child hygiene and public health nursing of the State of Illinois, addressed meetings in the interest of crippled children and held clinics for their treatment.

—Based upon Dayton's population of 153,830, recently announced by the census bureau, the death rate of 11.37 for 1919 is the lowest in the history of the city, the previous low mark having been 13, in 1915. Health Commissioner Peters ascribes the lowered rate largely to increased public intelligence in preventive measures, and partly to the fact that influenza in 1918 caused the death of many weakened persons who might otherwise have lived until 1919, thereby reducing the rate for the latter year.

—Dr. G. B. Morehouse, for four years assistant to the late Dr. Martin Friedrich, as chief of the Bureau of Communicable Diseases of the Cleveland Health Department, has been appointed his successor.

—At a recent meeting of the Trumbull County board of health the budget for the coming year was fixed at \$15,000. The salary of the health officer was increased to \$4,000 a year, and an appropriation of \$6,000 made for the employment of sanitary policemen.

—In view of the increased scope of its work,

the Columbus District Nursing Association is carrying on a membership campaign and invitations have been issued to 800 local residents asking them to become affiliated. The association was organized in 1898 by 32 women who assumed the responsibility of financing it. Two nurses were employed and had under their care 500 patients. In 1919, the membership had grown to 314, and during the year 5,979 patients were cared for. The nursing staff now numbers 10 and the report for the first three months of this year states that 3,795 patients were cared for, and a total of 12,600 visits were made.

—Ten classes in home nursing and hygiene, including two hundred women from the rural communities of Clark County, held their first session in April. The classes will receive sixteen lessons in practical home care of the sick and home sanitation from Miss Anna Johnson, public health nurse.

—Having received its third paring at the hands of the health advisory board, the Adams County health budget now stands at \$1,200. The original budget, adopted in September, called for a total of \$7,100, which in January was cut to \$3,400. The itemization of the new budget provides \$1,000 for the salary of a part-time health commissioner and \$200 for a part-time health clerk, but no provision is made for a nurse, medical supplies or incidental expenses.

—Dayton observed the week of May 2-8 as Mouth Hygiene Week, during which local dentists, physicians, teachers, public officials and various clubs united in a campaign to bring to the attention of the public the importance of a clean mouth to good health.



## Substantially Increased Medical and Surgical Fee Schedule Under Workmen's Compensation Law Becomes Effective June 1

The medical profession of Ohio will be gratified to learn that a substantially increased medical and surgical fee schedule under the Workmen's Compensation Law will be placed in effect by the Industrial Commission on June 1.

It has been universally recognized by the profession and by the Industrial Commission itself that the fee schedule adopted in November, 1917, and in effect since that time, has been woefully inadequate and unfair to those members of the profession whose practice included industrial cases coming under the state law. Those physicians and surgeons who have not been directly interested in such cases are, however, equally interested in knowing that the state, through the adoption of the new schedule, has recognized the fundamental need and increasing value of medical services.

The new fee schedule is the result of the spirit of cooperation which has existed between the Industrial Commission and the headquarters of the State Medical Association, and is due largely to the judgment and farsightedness of Dr. Thurman R. Fletcher, chief medical examiner of the Industrial Commission, who in conference with a special committee of physicians appointed by Dr. J. F. Baldwin, of the State Association, conferred at length and in detail, and agree upon the fairness, in general application, of the new schedule.

This new schedule does not of course contemplate fees in proportion to those a physician would expect to collect from a wealthy patient, but is based on a general average of such fees as could be expected "from an individual in moderate circumstances." By comparison of the new schedule with that previously in effect it will readily be seen, however, that most of the increases are substantial.

A new departure in the schedule effective June 1 is what is known as "flat rate" including the original attention or operation and subsequent treatment. Among the advantages which are pointed out for this new system are the encouragement of physicians and surgeons to attempt better immediate results; to enable them to know what their fees will be (by the elimination of an indefinite number of charges for subsequent treatment) and to minimize the amount of book-keeping and detail work both by the physician and the claims department of the Commission. It was believed that the inadequacy of the former fees allowed for original attention for operation really placed a premium on poor results as shown by a greater number of subsequent treatments and by delay in the recovery of the injured workman.

In recommending the adoption of the new schedule, following a formal communication addressed to the Commission by the special commit-

tee of physicians, Dr. Fletcher made the following statements which were given considerable weight by the Commission in placing the schedule into effect:

"The present schedule covering general fees was adopted November 21, 1917. Since that time it is needless to indicate the rapidity with which prices of all commodities have risen. The employers have realized this and in my judgment are equally as insistent as the physicians that the scale of prices be increased, chiefly due to the fact that they are frequently compelled to step in and guarantee to the physician or hospital the unpaid balances of their accounts as presented by the physician or hospital to the Commission for payment. I have observed that the employer as a rule does not object to the payment for medical services in reasonable amounts, but does object to paying accounts which he believes should be recognized and paid by the Commission. Communications have been received indicating many well equipped physicians are refusing to care for industrial cases."

In advancing the flat rate plan, Dr. Fletcher said: "After some discussion every physician present felt that the establishment of a flat rate fee schedule covering the more important surgical procedure would probably result with benefit to all concerned, and accordingly a schedule was prepared on this basis. I might state, however, that the plan was first suggested by myself and follows closely the method adopted in Washington and Idaho. In my opinion, the argument with most weight for the adoption of a flat rate schedule is that our present methods of having accounts submitted for approval places a premium on inferior work and compels the surgeon doing high class work and clean surgery to accept for his services a less amount than the first surgeon, for by his inferior work he is compelled to drag a case along making many more visits and dressings. In addition to paying more for inferior work, we are compelled in some cases to recognize a greater period of disability, consequently increasing the amount of compensation paid. In other words, a schedule on a flat basis would enable the surgeon doing first class work to collect a reasonable fee for his services."

The new schedule in addition to substantial increases for treatments of minor injuries, visits to patients, and other miscellaneous services as well as for operations, dislocations, fractures and amputations, allows additional fees for X-ray examinations of the hands and feet, and includes a special schedule for eye cases operated and treated by specialists.

The Industrial Commission is preparing a pamphlet containing the various new fee schedules,

together with other detailed information which will be mailed to members of the State Association.

The special committee of the Association which has been interested and active for a number of weeks looking toward the adoption of a new schedule, was composed of Dr. C. D. Selby, Chairman, Toledo; Drs. W. P. Chamberlain, Cleveland; J. R. Beiter, Canton; R. H. Wilson, Martins Ferry; Robert Carothers, Cincinnati; George P. Dale, Dayton, and J. F. Baldwin, Columbus.

The detailed schedule except that applying to dental surgeons, is here reproduced:

## MISCELLANEOUS.

Minor injuries (first dressing) day at office .....	\$3.00
Minor injuries (first dressing) home or hospital .....	5.00
Minor injuries (first dressing) night (9 P. M. to 6:30 A. M.) .....	7.00
Subsequent treatment at office.....	1.50
Hospital visit .....	2.00
House call .....	3.00
Administration of anesthetic by physician (minor operation) .....	5.00
Administration of anesthetic by physician (major operation) .....	10.00
Administration of anesthetic by hospital anesthetist .....	5.00
Assistant to surgeon (physician) minor operation .....	5.00
Assistant to surgeon (physician) major operation .....	10.00
Removal foreign body eye (ordinary).....	2.00
Suturing small cuts or lacerations office....	5.00
Injection antitetanic serum (including cost of the serum).....	5.00
Plaster casts (including material and depending on location).....	\$5.00 to 50.00
Wassermann examination .....	5.00
Blood examination .....	5.00
Urinalysis (chemical) .....	2.00
Urinalysis (microscopical and chemical)...	5.00

## SPECIAL OPERATIONS.

Laparotomy—minimum fee with after care .....	100.00
Note:—On account of vast difference in such cases, claim for services rendered should be based on special correspondence.	
Herniotomy—single (including after care) .....	75.00
Herniotomy—double (including after care) .....	100.00
Tendon suture .....	25.00
Reducing hernia by taxis and after care..	5.00
Note:—Truss will be paid for upon presentation of statement showing cost.	

## DISLOCATIONS.

Flat rate including reductions and subsequent treatment.

In a case of more than one dislocation, the fee shall be the major one plus an additional fifty percent of the fee prescribed for each of the others herein classified.

Shoulder .....	\$35.00
Clavicle .....	50.00
Elbow .....	50.00
Hip .....	50.00
Knee .....	50.00
Patella .....	5.00
Ankle .....	25.00
Finger .....	10.00
With 50% additional for more than one.	
Toe .....	5.00
With 50% additional for more than one.	
Lower jaw .....	10.00

## FRACTURES.

Flat rate including reduction and subsequent treatment.

In a case where multiple fractures occur the fee shall be the major plus an additional fifty percent of the fee prescribed for each of the others as herein classified.

Humerus .....	75.00
One bone of the forearm.....	50.00
Both bones of the forearm.....	75.00
Carpal, bones, one or more.....	15.00
Femur .....	100.00
Tibia .....	50.00
Fibula .....	25.00
Tibia and fibula .....	75.00
Patella, with operation .....	100.00
Patella, without operation .....	50.00
Os calcis .....	30.00
Astragalus .....	30.00
Tarsal other than os calcis or astragalus..	15.00
Rib—single or multiple .....	10.00
Nasal bones .....	10.00
Phalanx, metatarsal or metacarpal.....	15.00
With 50% additional for additional fractures.	
Pelvis—a proportionate fee on the above basis will be determined according to conditions present.....	
Coccyx, without operation.....	10.00
Coccyx, with operation.....	35.00
Lower jaw (not including dental work)....	40.00
Upper jaw, non-operative.....	15.00
Upper jaw—operative fee determined according to conditions .....	
Clavicle .....	50.00
Scapula .....	40.00
Skull, non-operative .....	25.00
Skull, operative .....	100.00
Vertebrae—minimum .....	50.00

Note:—On account of vast difference in such cases, claims for additional services should be based on special correspondence.

Compound fractures—An additional charge of 50% may be added in infected compound fractures.

Wiring or plating—An additional charge of 50% may be added when it is necessary to perform open operation. This is not in addition to amount allowed for compound fractures.

In unoperated complicated fractures in which



union is not taking place within ninety days, an additional charge may be allowed at the discretion of the Industrial Commission.

#### AMPUTATIONS.

Flat rate including amputation and subsequent treatments.

Note:—The minimum fee in the items under this section are intended to be applied in those cases where the injuries were so serious that death resulted within one week following the operation. The maximum and intermediate fees are intended to cover more extended subsequent attention.

In cases of more than one amputation, the fee shall be the major plus fifty percent of each of the others as herein classified.

Hip .....	\$100.00	\$150.00
Leg, at knee or above.....	75.00	125.00
Foot, ankle or below ankle.....	50.00	75.00
Arm, at shoulder joint.....	75.00	100.00
Hand, wrist, forearm or arm....	50.00	75.00
One toe or finger.....		25.00

With 50% additional for more than one.

#### GENERAL INFORMATION.

Reconstructive work to be paid for must be taken up with the Industrial Commission and fee decided upon prior to operation. This rule will be rigorously enforced.

A proportionate fee will be paid by the Commission in any case terminating fatally within a few hours.

In plastic operations and all other surgical procedures not included in this schedule, fees will be paid in keeping with other fees outlined.

In the event one physician renders first aid and the claimant is subsequently referred to another physician for completion of treatment and after care due to lack of proper facilities or for any other reason, a fee will be paid by the Commission in keeping with the services rendered and in addition to the flat rate schedule. In all cases it is incumbent upon the physician to set forth clearly the services rendered.

Itemized statements shall be furnished upon request of the Commission, if fee is claimed in excess of rate as given above.

In minor injuries daily dressings will not be paid for unless the necessity for same is clearly set forth.

Fees shall not be approved for the services of more than one attending surgeon over the same period of time. This does not apply to consultant, anesthetists, assistants, or cases where the need of an ophthalmologist is clearly shown.

Fees for high frequency or other electrical treatment will not be approved unless specifically authorized by the Commission.

Extra fees for dressing material and drugs will not be approved except in unusual cases wherein an extraordinary amount of such material or drugs is used. In such cases, the material or drugs used will be paid for at cost.

#### FEE SCHEDULE FOR PHYSICIANS SPECIALIZING IN DISEASES OF THE EYE.

Note—These fees will be approved only to physicians of recognized standing whose practice is strictly limited to eye, ear, nose and throat work.

- Foreign body of cornea and sclera:
  - Attached to cornea or sclera but not imbedded ..... \$2.00
  - Simple imbedded ..... 3.00
  - Difficult or complicated—including cases requiring use of magnet.....5.00 to 15.00
- Cauterization of corneal ulcer..... 5.00
- Laceration of lids or "conjunctiva" requiring suturing ..... 10.00
- Extraction of foreign body from inside the eyeball with or without magnet .....50.00 to 75.00
- Treatment extensive burn of the cornea (initial treatment).....5.00 to 10.00
- Penetrating wounds:
  - Not requiring surgical interference ..... 10.00
  - Requiring surgical interference (ex.—lacerated cornea with prolapsed iris requiring iridectomy)..... 50.00
- Enucleation of eyeball (flat rate including after care):
  - Simple enucleation ..... 50.00
  - Implantation operation ..... 75.00
- Plastic operation on lids.....50.00 to 100.00
- Extraction of traumatic cataract (flat rate including after care)..... 100.00
- Dissection of capsule (flat rate including after care)..... 50.00
- Operation on pterygium (flat rate including after care)..... 25.00
- Consultation ..... 10.00
- Complete ophthalmological examination and report ..... 10.00
- Complete ophthalmological examination and report for court purposes and only upon order of the Commission ..... 25.00
- Refraction .....5.00 to 10.00
- Office calls ..... 2.00
- Home calls ..... 4.00
- Hospital calls ..... 3.00

Note—Inasmuch as this schedule is to be used by specialists of recognized standing, it will be necessary for the specialist to indicate on fee bill filed that his practice is limited solely to diseases of the eye, or the eye, ear, nose and throat, and that he is recognized as a specialist along these lines in the community in which he practices.

#### RULES ON X-RAY.

The following rules and schedule of fees will govern the making of X-ray examinations of injured workmen protected by the Workmen's Compensation Act and payment thereof.

1. X-ray examination may be made upon request of the attending physician in any case where it can be clearly shown that such an examination is essential in the diagnosis or treatment of an industrial case.

2. It is understood that before the Industrial Commission may assume responsibility for such

examinations the claimant shall make application to the Commission, properly certified to by the employer and recognized by the Commission as a compensable claim.

3. A fee of \$10.00 will be allowed for X-ray examinations and must not be exceeded except under the following conditions.

(a) An additional charge of \$5.00 will be allowed if an examination of two or more parts of the body is necessary.

(b) A fee of \$5.00 will be allowed for subsequent examinations if such are necessary.

(c) An additional fee of \$5.00 will be allowed

for the accurate localization of a foreign body in the eye.

4. A written report and fee bill accompanied by prints or duplitzed films must be on file with the claim before charges will be approved.

(a) Reports of X-ray examinations should give the number of the claim, name of the claimant examined, name of the employer, name of the attending physician, date of examination, date upon which the injury was sustained, a complete interpretation of the examination made, and should be signed by the Roentgenologist making the examination.



**Skyline View of Toledo from Y. M. C. A. Building,  
Convention Headquarters**



## REPORT OF THE PUBLICATION COMMITTEE

## PUBLICATION COMMITTEE

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D. K. Martin, Secretary .....	Columbus

## To The Ohio State Medical Association

With the belief that *The Journal* should be the central arch in the organization structure of the Ohio State Medical Association, the Publication Committee during the past year has undertaken to further develop *The Journal* in its practical value to the medical profession of Ohio.

Through no other means could the problems of the profession be presented to the membership as well as through *The Journal*, which has been the means of disseminating valuable information of a news and policy nature.

It is with considerable pride that your committee points to the fact that no other medical journal in the country has contained so much valuable information of a practical nature, especially regarding legislative developments, state and federal regulations, court decisions affecting medical practice, and other matters of economic and social value to the profession at large.

As an indication of the wide scope of practical subjects covered in *The Journal*, over 50 per cent. of the hundreds of inquiries received at the office of the State Association each month could be completely answered by reference to material published or to be published in *The Journal*. For this reason, the Publication Committee has exerted its efforts toward having *The Journal* read more regularly and thoroughly by the membership.

With the problem of compulsory state health insurance constantly developing, *The Journal* from month to month has endeavored to review completely developments not only in Ohio, but in other states in the Union, experience from which should be of great help to the profession in Ohio in dealing with the question in the future. As a similar service, *The Journal* has accomplished much toward the elimination of differences and difficulties between the members of the profession and the State Industrial Commission with the result that the Workmen's Compensation Law as it affects physicians engaged in industrial accident cases operates at present with a minimum of friction. New and constantly changing regulations in the prescribing of intoxicants and other narcotics have been promptly called to the attention of the profession through the pages of *The Journal*.

While developing united thought and concerted action among members of the profession on matters of public policy, *The Journal* in the past year has not overlooked the fundamental consideration of a gradually higher standard in its scientific pages. This past year has included for the first

time since the state headquarters were organized with a permanent staff, some years ago, a medical editor who in addition to supervising and editing all original scientific communications, has inaugurated a department for medical comment in which success in new therapeutic methods and other scientific advances have been reviewed from time to time.

Through the efforts of the medical editor the Publication Committee is endeavoring to secure in advance copies of the scientific papers to be delivered at the annual meeting, in order that the schedule of original articles for the coming months may be formulated at once and their publication started as soon as possible following the meeting.

The membership of the Association should be gratified that *The Journal* is in a healthy, growing and solvent condition in spite of unprecedented and frequent increases in publication costs. With paper stocks trebled in cost, the labor charges practically doubled, and other overhead multiplied it can readily be seen that the increased cost of issuing *The Journal* can easily be explained, and while for the first time the net receipts from advertising failed to equal printing, paper and mailing charges, this committee through its attempt to make *The Journal* of greater value to the members, has felt justified in requesting from council increased appropriations for this function of the organization work. At the same time, this committee has carefully scrutinized all accounts in order to avoid any possible excesses without destroying the present efficiency.

To partially offset the increased costs, an average increase of 30 per cent. has been made in advertising rates. Most of these increases in rates, however, will not become effective until next year. Existing contracts with permanent advertisers have been continued on the old basis. This arrangement was at the suggestion of the Co-operative Medical Advertising Bureau maintained in Chicago under the auspices of the American Medical Association, and by which a high compliment was paid to this journal in the suggestion that the advertising rates be raised higher in proportion than those for most of the other medical journals. Gradually increased membership enrollment has partially accounted for the increased value of advertising pages, while justifying also increased expenditures.

In this issue of *The Journal* will be found the auditor's report, including costs and appropriations for *The Journal*, and which may be considered a part of this report.

Although your committee feels pleased with the record of the past year, it feels that *The Journal* can be further developed in value and benefits to the profession. Such progress will be coincident to increased membership and still greater co-operation.

## REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

## COMMITTEE ON PUBLIC POLICY AND LEGISLATION

J. H. J. Upham, M. D., Chairman.....	Columbus
J. B. Alcorn, M. D.....	Columbus
A. H. Freiberg, M. D.....	Cincinnati
J. F. Baldwin, M. D.....	Columbus
Charles Lukens, M. D.....	Toledo
Don K. Martin, Secretary.....	Columbus

## The Ohio State Medical Association:

It need be merely stated that the Eighty-third General Assembly of Ohio remained in session longer than any previous legislature to indicate the broad field of investigation and activity covered by your committee during the past year, and in spite of constructive efforts, the problems of the future—economic, social and political, threaten to be greater than those of the past.

Already experience during the post-war period has indicated that governmental functions and regulations affecting medical practice are apt to change radically and rapidly. This committee does not feel that it is presuming outside of its proper function in warning the profession of Ohio of the necessity of a constantly strengthened organization, with increased facilities for securing information and making its influence felt on propositions of public welfare generally.

Your committee feels that it has a just cause for pride in taking inventory of legislation up to this time. Your committee through the executive office of the Association, followed closely 59 bills introduced in the House of Representatives, and 22 introduced in the Senate, all affecting in some way public health, public welfare and the medical profession. Nineteen of the former and seven of the latter were enacted into laws. Some of these corrected errors or strengthened weaknesses in previous enactments having to do with sanitation, hospitals, public instruction and other general functions.

Aside from taxation and revenue problems which were especially difficult of solution and which required a large part of the time utilized in the lengthy legislative session, the medical profession was directly or indirectly interested in enactments providing a new institution and new facilities for the care of the feeble minded; for county and inter-county hospitals and tuberculosis sanatoria and dispensaries; for the strengthening of sanitary districts; stream pollution and sewage disposal legislation; the provision for a new institution for crippled children; a new department of hospital registration in the State Department of Health; better control of infirmaries and juvenile delinquency; more general inspection of public schools; severer penalties for issuance of school certificates to children; greater safety provided in mines, and stricter regulations of electric wiring in mines; prohibition of employment of women in molding rooms; requiring firms employing more

than five persons to contribute to the workmen's compensation fund; double levy permitted for mothers' pensions, and the correction of laws for the commitment of the feeble minded.

\* \* \*

The recent legislature was wise in not enacting compulsory state health insurance legislation; including occupational diseases under the benefits of the workmen's compensation law; granting special privileges to the chiropractors and other cults, nor recognizing Providence's special dispensation to the Christian Scientists.

\* \* \*

It is needless in this report to review in detail the history of the important Hughes Public Health Act which in spite of the Griswold Law amendments gives Ohio a first class public health administrative machinery. Although not providing the ideal arrangement of health administration, the present law may be considered a real step in advance over the previous system, and will constitute a foundation on which can be constructed, as the financial and taxation conditions in the various political subdivisions permit, a gradual and complete public health administrative organization.

It is important that the medical profession in supporting this and other constructive welfare legislation undertook to indicate to the leaders in the legislature that the profession is thoroughly unselfish and that in addition to its peculiar knowledge and influence in these matters, that it was actuated by the best motives in the interest of the public at large.

As a correlative thought your committee was fairly successful in convincing skeptical legislators that in matters affecting the treatment of the sick that the public welfare is thoroughly dependent on the maintenance of high standards in medical practice and that those things which are best for the profession are direct benefits to the public.

This latter idea was reflected particularly in the refusal of the legislature to recognize and endorse quackery and cultism through the formulation of a non-medical (chiropractic) board.

In this connection a situation fraught with many dangerous possibilities is found in recommendations submitted in April of this year—two months after the adjournment of the legislature—to the Joint Legislative Committee on Administrative Reorganization, by one of its hired investigators.

It will be remembered that this legislative committee, authorized under a joint resolution some months ago, provided an appropriation for a survey of state departments looking toward the abolition of some and the combining and consolidation of others. The report in question submitted by William H. Allen of the New York Institute for Public Efficiency, an employee of the com-



mittee, recommends the combining of the functions now exercised by the State Medical Board, the State Dental Board, the Board of Accounting, the Board of Embalming Examiners, Nurse Registration Board, the Board of Optometry, and the Board of Pharmacy, under an educational department headed by a lay executive.

This report, similar in many respects to the recommendations made a year and a half ago by Senator Howell Wright, of Cleveland, vice-chairman of the committee referred to, would abolish the State Medical Board as it now exists and submerge the identity of that department. It will undoubtedly appear singular that the State Board of Accounting would be considered as a proper function under a department of examination and licensure. It is significant that the legal profession is not to be included in this licensing arrangement; neither are the veterinarians, it being understood that at a state meeting of veterinarians in Columbus some time ago sufficient pressure was exerted to eliminate them from the proposed experiment.

This new plan has many earmarks of the present systems in effect in New York and Illinois, in neither of which states the public is protected from hordes of ignorant practitioners of various cults. It is understood that the condition is so far from satisfactory in New York state that a proposal is now being considered to modify the system in effect through the Board of Regents, to a system similar to that at present in operation in Ohio, which may be said to be better in practical results, both in fairness to the public and in justice to the qualified practitioner than at present in either New York or Illinois.

As a characterization of the system in Illinois under a so-called efficiency and economy law, the editor of the Illinois Medical Journal declares that it is "neither efficient nor economical". It is also significant that other states which have reciprocity agreements with Illinois are forced to reject an increasing number of Illinois applicants who seek to practice medicine elsewhere, due to the loose system of administration and the difficulty in maintaining high standards in examination and strict requirements as to licensure. It is further significant that the cost of administration is always problematical, and constantly soaring while in Ohio under the present system the general revenue fund of the state is relieved from any burden in the operation of the State Medical Board which more than pays its own expenses from the fees from examinations and from the admission to licensure. It seems to your committee that any lay commissioner of education could not be as well qualified to solve the problems of medical education as is a medical board, which is, and has been entirely free from the exercise of selfish authority or unfair discrimination. In practically all foreign countries the medical practice act is under the administration of a purely medical board, the results of

which are satisfactory and held up to administrations in this country as worthy of emulation. As a means of improvement without experimenting with a radical innovation, it is suggested that the inspectional bureau be strengthened to include service to or directly under the State Medical Board, thus aiding in the enforcement of the present laws.

While a subtle threat has been made through some political sources that the medical profession must either sanction the proposed new system of examination and licensure, or see the enactment of laws multiplying licensing boards for all limited branches of practice, a conclusive answer to the fallacy of either of these extreme proposals is found in a recent decision of a Court of Appeals, affirmed by the Supreme Court, in which it is held that:

"All of these limited branches were placed by the law under the control and guidance of the State Medical Board consistent with the theory conceived by the legislature in 1902. Provision is then made in Section 1274-2 for the examinations of applicants for practice in these limited branches which seems to be perfectly reasonable so far as applicants have no just ground for complaint.

"The solid and enduring argument against the passage of this and all similar laws (referring to a bill introduced some years ago seeking to divorce the respective branches of osteopathy and medicine) is and must be that encouragement should not be given to a separation or division of the healing art into schools, to the setting up of one against the other, and to the creation of rivalry among them; that every encouragement ought to be given to an exactly opposite tendency, to-wit, the gathering together under the general head of medicine of all the knowledge of the world concerning the healing art; and that when some discovery of importance is made in this field it should not instantly justify the birth of a new school of healing or therapy, at once seeking to divorce itself from its proper sphere, but should gain its recognition through the constituted medical and scientific channels."

By which decision it is seen that the Court was sufficiently clear-headed and far-sighted to see that all would-be practitioners who desire to treat the sick should have the same fundamental schooling and be required to pass the same fundamental examinations in anatomy, physiology, chemistry, bacteriology, pathology, hygiene and diagnosis, in addition to their particular system of therapeutics, as now provided under the State Medical Board.

This point is of particular interest at this time in view of the fact that a Common Pleas Court decision rendered in Cleveland some time ago and which restrained the State Medical Board from proceeding against unlicensed chiropractors is to be heard in the same Court of Appeals which rendered the above decision.

A constructive improvement over present laws, and a solution much more practical and beneficial than a consolidation of licensing departments, or the multiplication of licensing boards would be that recommended by indirection in the Court opinion quoted above, which would require all those who wish to treat the sick to take prescribed courses in all the fundamentals and pass the same examinations in those studies. Such practitioners could then choose the therapeutic methods of treatment found to be most efficacious upon diagnosis. This leads to the fundamental proposition that the public mind should be entirely disabused of the idea that "medicine" means merely "drugs". Medicine in its broadest sense and as understood by the medical profession in Ohio, and by the State Medical Board covers the science of the treatment of human ills presupposing a knowledge of physical ailments and based on complete and thorough diagnosis. In the words of Webster's Dictionary, medicine is "the science and art dealing with the prevention, cure and alleviation of disease."

\* \* \*

The Talley law which strengthened the penalty section of the medical practice act and which was one of the most constructive pieces of legislation enacted by the past legislature is of vital importance as an enforcement adjunct to regulatory measures. It is more than probable that a concerted effort to repeal this law will be made at the next session of the legislature by united forces of the various cults, and until this law is upheld by the higher court and made effective, a certain proportion of the gullible public will be imposed on, ruined in health and lightened in pocketbook by unqualified practitioners against whom there should be some effective remedy.

\* \* \*

A most comprehensive and far-reaching proposal, immeasurable in its detrimental effects, which will undoubtedly be an issue in the next legislature is that of Compulsory State Health Insurance. It will be remembered that a bill providing such a system for Ohio was introduced in the past legislature for propaganda purposes, it not being the intention of its proponents to urge its passage during that session. This paternalistic proposal has become a most vital issue in many of the leading industrial states of the Union, including Ohio.

New York may be considered as the "pivotal state" in the fight on this proposal during the present year, and while this battle is still on, the opposition to the proposal supported by substantial reason, is expected to be successful in averting a crisis.

It is quite probable that Ohio during 1921 will be selected as the battle ground on which an attempt will be made to graft such a scheme to state government, and while no state in America has yet had the temerity to experiment with this theory (bred and fostered in monarchial Eu-

rope), The American Association for Labor Legislation and other similar groups of theorists and visionaries, supplied with enormous funds, are hopeful and expectant of winning victory in the near future.

Aside from the severe blow which would be dealt to the medical practitioners through such a system, your committee believes, after a thorough investigation that the primary fallacies in such a proposal are of a general economic and social nature.

This committee, with the co-operation of a special committee on health insurance authorized and appointed by Council some months ago, after a comprehensive survey, concluded that opposition of the medical profession is justified toward any plan of state health insurance so far suggested.

It is the belief of this committee that compulsory health insurance is contrary to the fundamental principles of Americanism; that it would encourage class distinction; that it is essentially socialistic and destructive of that individualism which is necessary for best national development.

The cost of inaugurating compulsory state health insurance in Ohio would be inestimable, some authorities stating that the cost would reach as high as one hundred million dollars annually. In return the benefits would be extremely uncertain.

It is the belief of your committee that state health insurance is opposed to public policy in that it would encourage public extravagance largely through the employment of unnecessary officials and other functionaries; that by encouraging socialistic tendencies there would be a further and dangerous enlargement of the sphere of the state; that it is a danger to democracy and that the promises made are impossible of fulfillment and on this ground would undoubtedly create unwholesome industrial unrest.

Any plan of compulsory state health insurance so far suggested is considered a delusion in that the poorest poor who are most urgently in need of systematic financial and medical support are largely if not wholly outside the sphere of social insurance activities contemplated under the proposal.

The plan as suggested is opposed by business interests as visionary and dangerous, and as being unnecessary class legislation. It is opposed by conservative leaders of organized labor as a form of state charity. At best it is palliative and does not reach the seat of present difficulties.

In considering the medical profession itself, your committee is strongly of the opinion that through a system of compulsory state health insurance, the profession would be injured both morally and materially, as it would be a potent factor in checking the advance of medical science, in making the profession less attractive, and in fixing the remuneration of a class of espe-



cially skilled workers (physicians, dentists and nurses) without their consent.

Your committee believes as the proper alternative, the support of and increase in public health and sickness preventive measures, and in a more comprehensive plan of education as well as the abatement of disease and accident hazards.

Your committee has had the constant and thorough co-operation of the Publication Committee of *The Journal* in presenting from month to month to the profession the developments in Ohio and elsewhere on this vital question, and it is recommended that every physician become well informed on this question so that when his special knowledge is sought he will be in position to present the subject from the broad viewpoint of the public at large.

\* \* \*

In closing you are reminded that this committee has been constantly in touch with the prohibition and narcotic enactments as they affect the prescribing and compounding of drugs, and has had published in *The Journal* all new regulations. It will also be remembered that a new law is now in effect requiring physicians to report occupational diseases to the State Department of Health. This law was enacted in the nature of a compromise to postpone the inclusion of occupational diseases under the benefits of the Workmen's Compensation fund, until sufficient data is at hand on the subject to indicate the advisability or possibility of including such diseases under the Workmen's Compensation Law. As no estimate of the cost of operation or maintenance of the proposal has been made, and as the Industrial Commission with its present administrative machinery could not adequately care for the added number of claims of occupational diseases, the postponement of such enactment at this time was altogether justified.

Because the medical profession is in the best position to judge of sociological needs of definite character in the present and future, and as a further indication of humanitarian spirit evinced in the past, it will continue in the future to promote legislation looking toward better means and methods of disease prevention; of education of the public in the fundamental purposes of health; methods for bringing adequate medical care within the reach of all; establishment of diagnostic clinics; provision for periodical physical examinations; further development of public health nursing; more adequate care of maternity cases; co-ordination of public and private health agencies.

It is further recommended that definite and practical steps be taken to ascertain the extent of dependency upon public or charitable relief in the state, and the extent to which such dependency is due to illness.

\* \* \*

This report while of too great length, has undertaken to visualize future problems rather than

summarize past activities. Your committee in its annual report last year, published in the June (1919) issue of *The Journal*, covered legislation of the Eighty-third General Assembly up to that time.

### Maternity Hospitals Must Be Licensed

According to the definition of maternity or lying-in hospitals given by the State Commissioner of Health, any institution admitting maternity cases is now required to obtain a license from the State Department of Health to engage in maternity work.

For a number of years institutions engaged in such work have been licensed, this activity having been limited so far as hospitals are concerned to those institutions engaged exclusively in this work. With the definition of a maternity hospital as given by the Commissioner of Health, that any place receiving women for such care will be known as a maternity hospital, the regulations immediately govern hospitals operated exclusively for maternity cases, a department or ward of a general hospital or a private home used for this purpose.

The regulations generally provided for the equipment of these hospitals, including such sanitary measures as are necessary and give a definite outline for records which are to be kept for both hospital or home.

Applications for maternity hospital licenses must first be approved by the board of health in whose jurisdiction the hospital is located. A record of the license so issued shall be kept by the State Department of Health which shall give notice to the board of health presenting such application that the license has been granted. The term of the license shall be for one year and must state the name of the licensee, the number of patients to be accommodated and the location of the hospital or home.

### A Memorial

"A child of Denmark, a citizen of the United States, a man of the people, a model husband and a loyal friend. An indefatigable worker, a physician of the new school of enterprise and achievement. A dreamer of magnificent dreams, an architect of noble plans."

This was the tribute paid by Dr. John C. Oliver, acting dean of the Medical College of Cincinnati, to the memory of the late Dr. Christian R. Holmes in accepting on behalf of the faculty the gift of a bronze memorial tablet presented to his colleagues on April 18.

The tablets which hangs in the main corridor of Cincinnati General Hospital, bears a striking portrait of Dr. Holmes, beneath which the following inscription is dedicated: "A Man of the People. A Physician of Indomitable Will and High Achievement. His Vision of a City's Duty to Its Sick Stands Revealed in This Hospital and Medical School."

## REPORT OF COMMITTEE ON MEDICAL DEFENSE

## COMMITTEE ON MEDICAL DEFENSE

J. E. Tuckerman, M. D., Chairman.....Cleveland  
 C. T. Souther, M. D. ....Cincinnati  
 W. H. Snyder, M. D. ....Toledo  
 D. K. Martin, Secretary .....Columbus

To the Ohio State Medical Association:

Defense in suits alleging malpractice was made available to its members by the Association on May 18, 1916, subject to rules and regulations which were then established. A brief statement of the work of committee on medical defense, our general counsel, and the local defense committeemen shows the manner in which the medical defense provision is carried out.

Communications addressed to the executive secretary at Columbus or to the committee are referred to the chairman of the committee, and in general are answered by him. Questions of policy or obligation arising under the rules and regulations governing medical defense are referred to and passed upon by our counsel and their advice followed.

Members desiring to make application for medical defense can obtain blanks from their local committeemen, the secretary of their society, or the executive secretary of the State Association at Columbus. When filled out, the blanks can be sent to the executive secretary or the chairman or the committee. Application is reviewed by the committee, and if in compliance with the rules and regulations, is forwarded together with originals or copies of all essential correspondence to our general counsel, authorizing them to proceed with the defense. Thereafter the matter is entirely in their hands. They select local attorneys when and where necessary and the conduct of the case is the same as though they had been directly retained by the defendant.

In counties where suits are in progress the responsibility rests upon the local defense committeeman of seeing to it that the defense is accorded all possible assistance by the local members. How important this is was shown in a case in Youngstown where the co-operation of members made available through this agency so impressed the attorneys retained for the defense that they particularly noted the fact in their report to our general counsel.

The experience of the last year has shown that members who carry indemnity insurance may profitably file the details of suits or threats of suits with the committee as well as with the indemnity company. Whether a suit is conducted by our general counsel or by an indemnity company, the member is entitled to the full co-operation of the local defense committeeman and his fellow members.

Twenty-six applications for medical defense were received by the committee from January

1st to December 31st, 1919. In thirteen the suits had already been filed.

During the year the Association assumed the defense of three suits and seven threats of suits. In three suits and one threat of suit the defendants were entitled to defense under contract with indemnity companies. In two of these the technical question as to the defendant's right to protection under the indemnity contract had arisen. Our general counsel took the steps necessary to protect the interests of the defendants. The committee was unable to authorize defense in seven instances where suit had been filed, and in four threats of suit. Two were suits for slander, not for malpractice. In four no X-ray examination had been made, although reasonably available. In one the alleged cause for action occurred prior to the date of the establishment of medical defense. Three threats of suits were against members who had allowed their dues to lapse. One was for an alleged cause prior to the establishment of medical defense. In one the member making request failed to complete his application by filling out the necessary blanks.

On December 31st, the report of our general counsel shows that there were in their hands eight suits and seven threats of suits. Since their report two of these suits have terminated in favor of the defendants.

The experience of the past year justifies the following observations: Suits and threats of suits have been scattered over the state in some twenty counties. The most general cause for action arises out of alleged improper treatment of fractures. Half of the cases of this year belong to this class. The majority of suits are instituted by individuals who have received compensation under industrial insurance or who have been the recipients of gratuitous service at some hospital. The prompt reference of threats of suits to the committee is proving of distinct value to our members by relieving them of the necessity of replying to the communications incident to such threats, and seems to reduce the number of suits. Few threats so referred ever reach the state of actual suit. The importance of X-ray examination in cases of injury accompanied by fracture or likely to be accompanied by fracture is emphasized by the fact that in four instances the Association could not assume the defense merely because such examination was neglected. It is imperative that dues be paid before the first of the year if a member wishes to be fully protected under the medical defense. Defense was forfeited in three instances because the dues of the members making application had lapsed.

During the year Dr. W. J. Stone formerly of Toledo, and a member of the committee, moved out of the state, Dr. W. H. Snyder of Toledo, being appointed to the vacancy. It is fitting that a word of appreciation of Dr. Stone's service be



here recorded. It was chiefly due to his initiative and effort over a period of several years that the State Association instituted medical defense for its members, and it was through his good offices

that the plan was put into operation and has continued under the guidance of legal counsel experienced in this field.

J. E. TUCKERMAN, Chairman.

## REPORT OF COMMITTEE ON AUDITING AND APPROPRIATIONS

### AUDITING AND APPROPRIATIONS COMMITTEE

Wells Teachnor, M. D., Chairman.....Columbus  
J. E. Hunter, M. D.....Greenville  
J. S. McClellan, M. D.....Bellaire  
D. K. Martin, Secretary.....Columbus  
To the Ohio State Medical Association:

Your committee presents for its report for the year ending December 31, 1919, the official statement of Mr. H. A. Keller, certified public accountant, who is employed to audit the books of the Association and *The Journal*. No detailed explanation of the items contained therein is believed necessary, but a brief outline of the committee's process of checking receipts and regulating expenditures is timely.

At the beginning of each year the Committee on Auditing and Appropriations meets and gives careful consideration to the proposed expenditures, authorized by the constitution and approved by the House of Delegates, for the current year. It estimates the probable amount that will be received by the State Association from membership dues. Each of the Association's activities is then budgeted and to each separate activity is assigned a certain amount of money for use during the year, subject to approval by the House of Delegates at its annual session. No activity can draw money from the Association treasury except on voucher which bears the signed approval of the members of the Auditing and Appropriations Committee, and that committee permits no activity to draw an amount in excess of the budget appropriations.

The system of handling receipts is simple. The treasurers of the county societies collect annual dues from their members and remit the State Association's share to the executive secretary at Columbus. He issues to the county society a serially numbered receipt. He then deposits this money in the Citizens Savings Bank and Trust Company, of Columbus, to the credit of the Ohio State Medical Association. Checks against this account can only be drawn by the Executive Secretary (Mr. Martin) in favor of the Treasurer, Dr. Platter. Bank deposit slips are made out in duplicate and certified by the bank.

As previously stated, all disbursements are made through the Treasurer, Dr. Platter, on voucher approved by the members of the Committee on Auditing and Appropriations. In making such disbursements the Treasurer is guided by written directions from the committee. The Association is further protected from defalcation by surety bonds given by the Treasurer, the Executive Secretary, and the bookkeeper for *The Journal*.

### Auditor's Statement

Dr. Wells Teachnor, Chairman,  
Auditing Committee, Ohio State Medical Association, Columbus, Ohio:—

Dear Sir:—

In accordance with your instructions I have audited the books and accounts of the Ohio State Medical Association for the period October 10, 1918, to December 31, 1919, inclusive, and submit herewith report including as a part thereof the following schedule, viz.:

Schedule A: Statement of Cash Receipts and Disbursements for the period October 10, 1918, to December 31, 1919, inclusive.

All disbursements were verified by examination of cancelled checks. All receipts were verified by examination and proof of records. Cash as shown by bank pass book was reconciled with balance as shown on hand by the books, December 31, 1919.

I therefore certify that the statements herein correctly state the Receipts and Disbursements for the period October 10, 1918, to December 31, 1919, inclusive, and the resultant balance at that date.

Respectfully submitted,

(Signed) H. A. KELLER,  
Certified Public Accountant.

#### SCHEDULE A. STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS FOR THE PERIOD OCTOBER 19, 1918, TO DECEMBER 31, 1919.

Cash on deposit, Oct. 10, 1918..	940.99	
Certificates of deposit.....	7,000.00	
Total.....		7,940.99
<i>Receipts:</i>		
Membership dues, 1918.....	472.00	
*Membership dues for year		
1919 .....	16,877.00	
Certificate of deposit cashed	2,000.00	
Receipts from 1919 Annual		
Meeting .....	3,182.00	
Interest .....	50.00	22,581.00
Total to be accounted for.....		30,521.99

*3753 regular membership dues at \$4.00.....	15,012.00
873 military membership dues at \$2.00.....	1,746.00
33 pro-rated membership dues at \$2.00.....	66.00
33 pro-rated membership dues at \$1.00.....	33.00
4692 members paid for 1919.....	16,857.00
1918 dues for 5 members, received in 1919.....	20.00
Total membership receipts.....	16,877.00

*Disbursements:*

Ohio State Medical Journal	7,800.00	
Execut. Secretary, Salary..	5,400.03	
Executive Secretary,		
Traveling Expense.....	669.46	
Annual Meeting Expenses..	2,863.14	
Secretary-Treasurer, salary		
and expenses.....	422.00	
Councilor expenses.....	347.96	
President expenses.....	40.80	
Auditing and Appropria-		
tions .....	128.95	
Legislation .....	402.07	
Medical Education.....	116.20	
Medical Defense.....	1,755.73	
Stationery and Supplies...	529.10	
Postage and Telegraph.....	949.44	
State Committee, Council		
National Defense.....	224.72	
Assistant Executive Sec-		
tary, Salary .....	1,187.50	
Dues Refunded .....	8.00	
<hr/>		
Total accounted for.....	22,845.10	
<hr/>		
Balance on deposit, Dec. 31, 1919....	7,676.89	

**Budget for 1920.**

At a meeting held on January 4, 1920, the Committee on Auditing and Appropriations estimated the receipts from membership dues during the year would be at least \$20,000. After careful consideration of the needs of the coming year, your committee made the following apportionment of funds, which has been approved by Council, and is herewith presented to the House of Delegates for official indorsement.

Journal .....	\$8,000.00
Treasurer, salary .....	300.00
Executive Secretary, salary.....	4,000.00
Executive Secretary, expense.....	400.00
President, expense .....	100.00
Councilor, expense .....	400.00
Annual meeting, expense.....	400.00
Auditing and appropriation.....	150.00
Medical education .....	250.00
Medical defense .....	3,000.00
Stationery and supplies.....	600.00
Postage and telegraph.....	900.00

The balance of \$7,676.89 remaining from the year 1919, and receipts not definitely appropriated through the funds in the above itemization, accrue to the *unassigned funds*, in the custody of the Treasurer of the Association.

## CONDENSED ACCOUNTANT'S REPORT OF THE OHIO STATE MEDICAL JOURNAL FOR THE YEAR ENDED DECEMBER 31, 1919

ASSETS		
Cash in office.....	25.00	
Cash in bank.....	246.88	
<hr/>		
Total cash.....	271.88	
Accounts receivable.....	673.92	
Liberty Bonds .....	300.00	973.92
<hr/>		
Furniture and fixtures.....	651.91	
<hr/>		
Total assets .....	1,897.71	

SURPLUS		
Surplus at Dec. 31, 1918.....	2,349.99	
Net profit—Loss—for the		
year ended Dec. 31, 1919....	452.28	
<hr/>		
Total liabilities and surplus.....	1,897.71	

REVENUE		
Advertising .....	5,978.32	
Circulation .....	7,854.12	
Subscriptions .....	7,800.00	
Miscellaneous subscriptions....	17.50	
Interest .....	26.25	
<hr/>		
Total revenue .....	21,676.19	

EXPENSES		
Subscriptions to members.....	7,800.00	
Journal postage.....	317.72	
Journal printing .....	6,832.41	

Miscellaneous printing.....	721.98
Postage .....	90.27
Rent and telephone.....	801.13
Salaries—clerks, etc.....	4,809.00
Traveling .....	187.60
Subscriptions .....	57.68
Office supplies .....	35.54
Reporting .....	273.39
Insurance .....	5.45
Misc. expenses .....	108.80
Bad debts written off.....	36.20
Depreciation .....	51.30
<hr/>	
Total expenses .....	22,128.47

Net Profit—Loss—for the year ended	
December 31, 1919.....	452.28
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I have audited the books and accounts of the *Ohio State Medical Journal* for the year ended December 31, 1919, and hereby certify that the statement as shown above correctly states the financial condition of *The Journal* at December 31, 1919, and the resultant loss for the year ended that date.

(Signed) H. A. KELLER,  
Certified Public Accountant.

Columbus, Ohio, February 12, 1920.



## REPORT OF COMMITTEE ON SOCIOLOGY

## COMMITTEE ON SOCIOLOGY

S. J. Goodman, M. D., Chairman.....	Columbus
G. E. McCullough, M. D.....	Troy
J. F. Elder, M. D.....	Youngstown
Don K. Martin, Secretary.....	Columbus

## To The Ohio State Medical Association:

It needs but a glance at the large number of subjects, which might properly fall within the field of investigation, to bring this committee to the realization of the fact that it would be manifestly impossible to consider them all. They are all important and have intimate relationship to the economic and sociologic welfare of our profession. We have felt that it would be better to give our most careful attention to one subject than to carelessly pass judgment upon a large and varied collection.

The matter of reproduction among the human race and the replacing of the tremendous number of people lost in the great war and the recent epidemics impresses us as being of the greatest economic and sociological importance at this time. If we are to continue as a nation and lead the world in matters sociologic it behooves us to consider the tremendous loss of life and the fearful morbidity which is the direct result of bad obstetrics. The figures presented by statisticians, who are well equipped for the study of this subject, are indeed appalling. The world is today taking most urgent measures for the prevention and eradication of tuberculosis, syphilis and venereal diseases in general. Hospitals are being endowed for the care of cripples, the blind and other unfortunates. But what is being done toward providing the urgently necessary improvement in accommodations for the pregnant women? If we will do our part in improving the practice of obstetrics; in doing away with the midwife and incompetent accoucheur; in providing proper nursing service for *all classes* of parturient patients we will not need so many institutions for the care of those who are the results of the lack of such provisions. The matter of nursing care has assumed such proportion that the committee has deemed it advisable to treat this subject in a separate paper, to be read before the section on obstetrics. While this paper is an intimate part of this report we feel that some good may be accomplished by the discussion of the same by those attending the obstetric section.

In the same category as the preceding might be considered the subject of *criminal abortion*. It is recommended that the State Association increase its efforts toward the apprehending and conviction of those whose business includes the production of criminal abortion. There is no question but that this practice is rampant. Those of you who are connected with hospital staffs need not be apprised of the number of cases coming to our attention. It is not the one abor-

tion that counts so much. It is the fact that out of this army of women, who have murdered their first offspring, but a small proportion again conceive. The apparent impunity with which the abortionists ply their trade had made many of them impertinent to the existing laws. It surely is not necessary to dilate upon the moral effect of these practices upon our young married people. As our politicians are wont to say, "We view this condition of affairs with alarm."

The matter of *advertising* is ever one which arouses discussion in our profession. Your committee feels that this subject is pregnant with importance to the new committee on economics and should merit their earnest attention.

The stench of *expert testimony* is still unabated and we feel that the Association should take active interest in this matter and that the subject should be discussed with the bar associations and some remedy provided for the amelioration of this unpleasant condition of affairs.

The place of the medical profession in the *military affairs* of our country is by no means assured at this time. It behooves our Association to be ever on the alert and insist that we secure such rights and privileges as will assure our being able to render the best service in times of need. Careful consideration of this matter will render immense economic service to the profession.

The matter of *fees* for services rendered by the profession is of tremendous importance at this time. While all commodities have reached unheard of prices the medical profession has seen fit to sit idly by and do its work at the same fees as it received twenty years ago. This is, of course, an economic absurdity. The public must be taught that bread and meat are just as necessary to the medical family as to others and that the price is the same to the doctor as it is to the plumber. You may think that this education is unnecessary but when you read that an Ohio grand jury accused one of our constituent societies of profiteering because they saw fit to raise their fees to a living wage, somewhat proportionate to that of the carpenter and street sweeper, you will change your mind. It is time to wake up and give your families a chance.

Your committee does not feel that it should spend much space in the consideration of *compulsory health insurance* because this matter will receive most extended attention in the halls of our society. Suffice it to say, we feel that it will be a curse and a blight upon the profession, in spite of the siren songs warbled by college professors and others whose sole source of income for many years has been the public trough. It is most significant that the medical men who see this mirage and most earnestly advocate health insurance *never had a day's experience*

in the every-day practice of medicine. Eternal vigilance is the price of freedom. Ergo.

The efforts of the American College of Surgeons toward the *standardization of hospitals* will undoubtedly be of great economic value to the profession. The public will profit by these measures and whenever we can offer anything of value to the public we fulfill our obligation as a profession. The end results of this propaganda will be that those who are willing to put forth honest efforts for the production of good

work and the upbuilding of the profession will receive such rewards as they are entitled to and the sociologic and economic benefits will inure to the entire guild.

Your committee wishes to offer the above for the consideration of your new economic committee. We feel that we have left much undone and for this we offer profound regrets and ask that you be most considerate in your judgment of our efforts.

SYLVESTER J. GOODMAN, Chairman.

## REPORT OF COMMITTEE ON MEDICAL EDUCATION

### MEDICAL EDUCATION COMMITTEE

C. E. Briggs, M. D., Chairman.....Cleveland  
William D. Porter, M. D. ....Cincinnati  
Ben R. McClellan, M. D. ....Xenia  
D. K. Martin, Secretary .....Columbus

To The Ohio State Medical Association:

The Committee on Medical Education was appointed by the president following the last annual meeting. No notification was received by any of the members, however, although such notices were said to have been sent. The first knowledge of the appointments was received by the chairman in a letter of April 16, from the executive secretary asking for the annual report of the committee. For this reason the committee has been inactive this year, has held no meetings, and has had no recommendations to make.

Certain work along this line has been done, however, owing to decisions made by the committee of last year, the program as arranged on March 9, 1919, having been carried into effect. This program consisted of twelve lectures given by Dr. Harold N. Cole, Cleveland, former director of the Bureau of Venereal Diseases, State of Ohio, and Ass't. Prof. of Dermatology and Syphilis in Western Reserve University School of Medicine. The subject was "Venereal Diseases, Their Diagnosis, Treatment, and Control." This was a part of the effort made by the Bureau of Venereal Diseases of the United States Public Health Service to get this important matter before the laity and the profession of Ohio, the direct work of the Public Health Service of Ohio being among the laity. The twelve lectures were given between May 27 and September 25, 1919, with a total attendance of 1230. The program was judged to be very successful, and the committee desires to express to Dr. Cole its most sincere appreciation of the service he has rendered in this series, and to Mr. Martin, the executive secretary, for the very efficient way in which the details of the meetings were managed. These and other similar efforts have required large sacrifices in time and energy on the part of those who have given the courses, sacrifices which can be justified

only by the degree of good accomplished, and the satisfaction of work well done.

The schedule of the meetings was as follows:

- May 27 Chillicothe—For physicians of Ross, Pickaway, Pike, Fairfield and Fayette Counties. Attendance 25.
- July 8 Bucyrus—For physicians of Crawford, Marion, Morrow, Wyandot and Richland Counties. Attendance 90.
- July 17 Cedar Point—For physicians of Erie, Huron, Lorain, Medina, Ashland, Seneca, Hancock, Ottawa, Sandusky, Paulding, Defiance, Williams and Fulton Counties. (Cuyahoga and Lucas through Academy Secretaries.) Attendance 125.
- Aug. 19 Bellefontaine—For physicians of Logan, Champaign, Shelby, Hardin and Marion. Attendance 55.
- Aug. 21 Portsmouth—For physicians of Scioto, Adams, Jackson, Lawrence, Gallia and Pike. Attendance 65.
- Aug. 26 Canton—For physicians of Stark, Portage, Summit, Wayne, Tuscarawas, Jefferson and Harrison. Attendance 165.
- Aug. 28 Zanesville—For physicians of Muskingum, Licking, Guernsey, Perry, Morgan, Noble, Monroe, Coshocton and Belmont. Attendance 80.
- Sept. 2 Athens—For physicians of Athens, Vinton, Hocking, Washington and Meigs. Attendance 40.
- Sept. 4 Marysville—For physicians of Tenth District Meeting. Attendance 160.
- Sept. 16 Lima—For physicians of Allen, Paulding, Van Wert, Mercer, Auglaize and Putnam. Attendance 125.
- Sept. 23 Dayton—For physicians of Second District. Attendance 175.
- Sept. 25 Youngstown—For physicians of Ashtabula, Trumbull, Columbiana, Geauga, Lake and Mahoning. Attendance 125.

The committee regrets the circumstances which prevented a knowledge of its appointment as it would seem very desirable to have arranged for presentation at this time some decision regarding further undertakings. Since receiving the letter of April 16 of the Executive Secretary, however, it has been quite impossible to arrange a meeting for such a purpose.

CHARLES EDWIN BRIGGS, Chairman.



## REPORT OF GENERAL SECRETARIES COMMITTEE

## GENERAL SECRETARIES COMMITTEE

C. O. Jaster, M. D., Chairman.....	Elyria
K. R. Teachnor, M. D. ....	Hamilton
James A. Beer, M. D. ....	Columbus
Charles Lukens, M. D. ....	Toledo
Don K. Martin, Secretary.....	Columbus

To The Ohio State Medical Association:

The General Secretaries Committee holds at least one distinction which places it in a field apart from the other standing committees of the State Association, in that it has not held a meeting since its appointment a year ago, but has transacted its business entirely by correspondence.

It occurred to the chairman soon after his appointment that one of the worth while functions of the committee would be to definitely ascertain whether or not there exists an actual shortage of physicians in Ohio, and to undertake means to remedy the situation if found to be detrimental to the future of medicine and to the welfare of the public.

It was found that the number of physicians for the past decade has not kept pace with the proportionate increase in population, either in Ohio or the nation at large. With the population of the country increasing approximately two million each year, an average annual production of 3,500 physicians are estimated to be the demand necessary to meet the country's needs for at least the next generation. However, there has been but an average of 2,500 medical graduates admitted to licensure annually in this country since 1915.

There are said to be in the country at large one physician to every 700 persons, and in spite of the fact that the health of the public is administered to as efficiently in Ohio as anywhere else in the United States, the proportion of physicians to population in this state is less than the general average for the country, being about one physician to 800 persons.

It is rather startling to observe that the number of physicians being licensed in Ohio has been steadily decreasing during the past five years, the total admitted last year being 143, and for the preceding four years in retrogradation there were 152, 188, 171, 172.

It is encouraging to observe that the improvement in preliminary qualifications of those seeking admission to practice and those undergoing courses of study in medical colleges is being constantly raised so that the standard of training for each succeeding year's group of Neophytes being admitted to the field of medical practice is constantly improved. The only objection to the strict preliminary requirements before entering the study of medicine is the fact that the field of possibilities is gradually being narrowed. To meet in a measure this situation this committee

undertook in a more or less cursory fashion to encourage more young men and women to enter into the study of medicine. Whether or not results were obtained may be reflected in the larger number of students registered in medical colleges this year over that of recent preceding years.

Pursuant to this policy, this committee recommends that an effort be made by the medical profession in Ohio to encourage more young men of character and intelligence to take up the study of medicine. A systematic effort might be made by each local medical society at least during the two months prior to the registration for the fall term.

It has been the purpose of this committee to call to the attention of the secretaries of the various societies, particularly beneficial results obtained through various activities and the development of new ideas in other societies. In this matter the committee has had the fullest co-operation of the Publication Committee in the use of the columns of *The Journal*. Through co-operation with this committee an effort has been made to constantly call the attention of the medical profession to the newer developments on the problem of state medicine and compulsory health insurance. At least one meeting and in many instances a series of meetings have been devoted by the local societies to this subject.

As an innovation this committee has encouraged the state headquarters to inaugurate a system of periodical bulletins to county society secretaries calling attention to new state and federal regulations affecting medical practice; to emphasize the importance of special articles in *The Journal*, and to increase the membership enrollment in the local societies and in the State Association.

The effective results in this latter undertaking speak volumes of praise for the consistent efforts of the local secretaries and treasurers.

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As a supplement to the foregoing committee report, Dr. Jaster, chairman, submits additional views on pre-medical and medical education for the consideration of the membership:

"I do not undervalue education nor pre-medical requirements, but I believe one thing alone has been principally responsible for the gradual decrease in the growth of the physicians and that is the sudden raising of requirements of pre-medical education to the degree of the present day. We can all appreciate how difficult it would be to apparently lower the standards of admission to medical colleges, and possibly those who control that situation are fortunate in possessing that degree of pre-medical education now required of the new applicant. However, the more gradual raising of this standard, it seems to me, would have had a less serious effect, for we cannot evade the question, was not the act of raising the standard

of admission requirement largely the cause of the enormous increase in the number who adopted quackery, such as the various cults. There are those among us who know among our acquaintances one or more young men or women who entered these near-professional careers, for no other reason than that they were excluded from possible entrance to a medical school by the then and now high standards of pre-medical educational requirements.

"The late war has brought forth many facts for our realization in regard to the available number of physicians. As a result of war life, also, many physicians were killed or died, the number being far in excess of what we would expect the ordinary death rate to be in normal times, even with a 'flu' epidemic to meet.

"Thus far our efforts to reconstruct our ranks have been to encourage young men and women to take up the study of medicine. To do so today, in the face of possible radical reforms, which threaten to kill the practice of medicine as an inviting form of work, the man or woman who undertakes the work must be one born for the medical task, as otherwise there can be little to invite them to undertake five to seven years of study. At the present rate of remuneration for services rendered, it is the exception rather than the rule to find a physician who is able to save as much as the ordinary craftsman or tradesman.

"When the standards of medical education were raised to the present degree (and I understand it is even suggested that another year be added to the requirement for graduation) this radical step was taken without due consideration of the possible future needs of the country. Already, quackery was growing rapidly and excellent progress was being made to curb this. I do not need to say that fighting quackery was not made easier by having their number multiplied several fold while at the same time we saw the number of legitimate medical graduates wiped out to the degree they were. And of these latter there would have been not a few loyal fighters to maintain the standards of the medical profession.

"I believe many of our thinking physicians will agree with me that today there is an over effort at education of prospective physicians, while there is considerable lacking in the development of efficiency of physicians from a practical view.

"Compare the requirements for preparation to enter the various sciences, manufacturing management, and business. Not one requires as much time at education without pay as does medicine. This shows medicine to be the greatest and most important of the whole.

"It is my belief that we who are in the practice of medicine and who have more or less influence as to the control of our science, its standards, its requirements for admission, should awaken to the needs of the situation and now is the time. If we cannot feel that we should admit that the raising of the standards of pre-medical education require-

ments are now too high, and proceed to re-arrange them, we surely can enlarge and widen the scope of our medical courses to provide such education as may be deemed necessary for the prospective medical student to meet during his course of study.

"I call attention to the fact that during the close of a medical course much time is given to the specialties and surgery. This valuable time could well be devoted to the more essential subjects in medicine and minor surgery and leave the development in surgery and the specialties for such post-graduate study, as a graduate might elect later.

"But before anything more is done to legislate probable medical students out of the possibility of adopting this work, I would strongly favor reducing the pre-medical requirements, with at the same time providing opportunity for completing such essential studies as are lacking in the needed pre-medical education, and with the establishing of grades of practitioners depending upon their ability to demonstrate their right to progress from one class to another by competitive examination just as, or similar to manner in which teachers are graded in the public schools.

Possibly I have suggested a quite impossible situation, but we can recall that medical colleges are now classed, and hospitals are being standardized, and an effort is already born and growing, to class some of the members of special practice.

"It would seem as though those who are working for the good of medicine must be able to see far enough ahead that there is a time coming when continued shortage of physicians must mean that the too high standards of efficiency of physicians may become the monument to the memory of their work well done, and a disappearing class. We should look ahead an hundred years and more to anticipate the usefulness and practicability of what we do today."

### Small Advertisements of Interest

*Wanted*—The Van Houten and Ten Broeck Static Machine with sixteen or more plates. Dr. K. G. Cieslak, 2297 W. 14th St., Cleveland.

*Wanted*—Assistant physician at the Ohio Hospital for Epileptics, Gallipolis, Ohio. Single men preferred. Salary \$1320 to \$1800 per year and maintenance. Apply to G. G. Kineon, M. D., Superintendent.

*Wanted*—Position by graduate nurse as superintendent of 100 or 150 bed Ohio hospital. Graduate of Hartford Hospital Training School, with nine years' experience in such positions as head nurse, night superintendent and superintendent. Address C, care *The Journal*.

*Wanted*—Position as physician's office assistant by young lady with ten years' experience. References furnished. Address K, care of *The Journal*.

*Wanted*—Full time woman physician. Fifteen hundred dollars per annum with full maintenance. Address Chief Matron, Girls Industrial School, Delaware, Ohio.



## REPORT OF ADVISORY COMMITTEE ON HOSPITAL STANDARDIZATION

### ADVISORY COMMITTEE ON HOSPITAL STANDARDIZATION

Andrews Rogers, M. D., Chairman.....Columbus  
C. F. Hoover, M. D. ....Cleveland  
Robert Carothers, M. D. ....Cincinnati  
Don K. Martin, Secretary .....Columbus

To The Ohio State Medical Association:

Your committee, appointed at the request of the American Medical Association as an advisory committee, to act with the Council on Education of the American Medical Association, desires to present the following summary of the work in Ohio.

First. That the work of the Committee as laid out by the Council on Education, was active, personal investigation and not advisory at all.

Second. That each hospital upon which a report was desired by the Council was personally visited by the member of the committee in whose district it fell.

Third. On January 29, 1920, the Committee met in Columbus and after hours of careful consideration and deliberation from all angles, each institution was given a rating. The chairman was instructed to forward the results of this meeting, spread on the proper blanks, to the Council on Education.

ANDREWS ROGERS, Chairman.

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Over a year ago the Council on Medical Education of the American Medical Association requested President E. O. Smith of the Ohio State Medical Association to appoint a State Advisory Committee on the Standardization of Hospitals.

Prior to 1918, the Council on Medical Education had made two surveys of the hospitals of the United States, the first in 1912 and 1913, the second one in 1915. The third hospital survey was taken in April, 1918. At this time, there were 6440 hospitals in the United States having ten or more beds, or a total capacity of 758,442 beds. Of these hospitals, 4,927 had from 10 to 100 beds; 817 had from 100 to 200; 447 had from 200 to 500, and 277 had over 500 beds.

The immediate purpose of these surveys was to determine the fitness of hospitals to meet the requirements of a compulsory "fifth year" to be spent by the medical student as an intern in a hospital. It was clear, at a joint meeting of the Council on Medical Education, the Association of American Medical Colleges and the Association of State Boards, in March, 1919, that these organizations were committed to the policy of the hospital year, and that the "fifth year" would soon be an accomplished fact. The remote purpose of the inspection, whose scope was widened to include all hospitals, was to advance the standards of the hospitals throughout the country and thus to provide ultimately scientific care for the sick. Blanks which were sent out by the Council

on Medical Education brought the information that 5,342 hospitals, or 82.6 per cent, did not use interns and that only 1,126 hospitals, or 17.4 per cent, were using or desired to have them. These 1,126 hospitals desiring interns, had, however, 35.6 per cent of the total bed capacity. It was also shown that the demand for interns was far in excess of the supply.

In the summer of 1919, the data obtained by the prior surveys, literature, and instructions, were placed in the hands of the new State Advisory Committees. The Committees also received questionnaires which had been filled out by the hospitals which had signified their desire for interns to the Council of Medical Education. The inspection to be made, covered the construction, condition, location, and sanitation of the hospital; its finances; the number of beds, and their distribution; the number of patients taken care of by the hospital and their type; the equipment which included operating rooms, sterilizers, dressing rooms, electrocardiograph, Roentgenological, pathological and clinical laboratories and their equipment; and autopsy rooms. It included the provisions for anaesthetics, diabetics, for library, for social service, for accident service, and for out-patient departments. Emphasis was placed upon the histories and records, by whom taken, and made, by whom signed, and how filed, and on methods of indexing. The methods of running the training school were to be investigated, the superintendent and her degrees; the number of nurses, their instruction and supervision, etc. The qualifications and organization of the staff was a crucial point. Inquiries were made as to the number of interns in the hospital, rates to patients, length of service, how appointed, supervision and instructions, opportunities for history taking and physical examinations; for Roentgenological, pathological and clinical laboratory work; for anaesthetics; for accident service, maternity cases, major and minor surgical operations, and out-patient work; and for autopsies. Finally the Committee was asked to specify what it considered the excellent points and the defects of the hospital and to make recommendations for improvement.

### Low Death Rate

Ohio's death rate from contagious diseases was lower last year than at any time in the past 11 years. Diphtheria was the only disease claiming more victims last year than in the previous year. Out of 100,000 population 122 died of tuberculosis as against 145 for the preceding year. The typhoid fever rate was 8 against 14; diphtheria, 12 as against 9 the previous year; whooping cough, 4 against 13; measles, 3 against 5, and scarlet fever, 2 against 3.

## REPORT OF COMMITTEE ON CONTROL OF CANCER

## COMMITTEE ON CONTROL OF CANCER

Andre Crotti, M. D., Chairman.....Columbus  
 Chas. W. Moots, M. D.....Toledo  
 Chas. E. Holzer, M. D.....Gallipolis  
 D. K. Martin, Secretary.....Columbus

To The Ohio State Medical Association:

The work of the Committee on Control of Cancer this year extended into far wider fields than at any previous time and culminated in a state-wide cancer campaign the week of Sunday, May 9th. This broad educational movement organized by the State Committee, was carried into effect through eleven district chairmen and local county committees with the closest cooperation of the presidents and secretaries of the county societies.

Preliminary to the general campaign directed to the laity, propaganda within the medical profession itself was carried forward on a definite basis. During the preceding months, articles on the various phases of cancer were carried in *The Journal*, and one or more meetings on the subject were held by practically all of the local medical groups.

On account of the wide variety of conditions in the various communities the campaign was organized locally on a basis found most desirable by the local chairmen working in conjunction with the respective district chairmen.

On Sunday, May 9, the beginning of Cancer Week, a concentrated and fairly successful effort was made to have the subject presented from the pulpits in the various churches. In some instances considerable time was devoted in these services to the presentation of the subject by physicians. In others, the ministers announced group meetings which were planned for the succeeding six days. The field was covered with literature as well as possible with the limited supply of pamphlets furnished by the United States Public Health Service and the American Society for the Control of Cancer, a total of 30,000 pamphlets being available.

A number of physicians in the various communities very kindly granted their services as speakers. The basis of the presentation for the cancer message was the Lecture Outline No. 1 furnished by the American Society, which was found particularly adaptable to this purpose. A number of the lectures were illustrated with lantern slides.

In some instances the local Red Cross Chapters and particularly the women's clubs were instrumental in organizing meetings. The local committees were successful in presenting the message before civic and welfare groups, and as the basis of newspaper publicity material prepared by the state committee was sent out from Columbus, including news articles and "plate"

material, the latter consisting of an excellent drawing by W. A. Ireland, of the Columbus Dispatch, and an editorial by George F. Burba.

Care was taken to present the subject in plain and simple language readily understood by the lay mind. Care was also taken to make the message one of hope rather than despair. The two thoughts uppermost in the campaign were: first, that people must learn to recognize the danger signals and their significance in time; secondly, that there should be a wide-spread understanding of the hopeful message of modern medical science to the effect that many otherwise fatal cases of cancer could be prevented if detected in the early stages.

Emphasis in the lectures and educational propaganda was placed on the mortality figures which were extremely effective in conveying the message. The fact that 90,000 deaths from cancer occurred in America last year; the fact that one out of every eight women, and one out of every 14 men over the age of 40 die from cancer; the fact that the annual death rate from this disease is greater than the lives lost during the two years of the late World War, were effective in securing attention for the real message.

Prior to the campaign a large proportion of the time for many weeks previous was devoted by the chairman and members of his committee, and it is the hope of the committee that the work undertaken this year will be carried forward and further developed in succeeding years, it being recognized that in an educational movement of the scope, interest must not be permitted to lapse at any time.

The chairman of the State Committee also served as director of the campaign for central Ohio. Other district chairmen to whom the committee expresses cordial appreciation, were: Drs. J. L. Ransohoff, Cincinnati; L. G. Bowers, Dayton; C. W. Moots, Toledo; F. E. Bunts, Cleveland; J. A. Sherbondy, Youngstown; E. J. March, Canton; R. V. Luce, Akron; J. C. M. Floyd, Steubenville; H. T. Sutton, Zanesville, and Charles E. Holzer, Gallipolis.

The Cancer Committee wishes to express its appreciation of the untiring efforts and loyal support given this work by the executive secretary of the Ohio State Medical Association, Mr. Don K. Martin. To him belongs a great deal of credit for the success of the campaign.

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The rapid growth of the American chemical industry is indicated by the announcement that The Abbott Laboratories have recently purchased 25 acres of ground in North Chicago and will soon commence building an additional plant for the exclusive manufacture of synthetics and other chemicals.



## Gratifying Membership Record Indicates Effective Organization Efforts of Councilors and County Society Officers

For convincing evidence that the year 1920 is unique in the membership annals of the State Association one need go no further than the accompanying tabulation of the enrollment in the various districts during this and the past year. On May 6, the day on which this compilation was prepared, the paid-up members of the Association numbered 4,534. These figures represent a gratifying increase over the enrollment on the same date last year, and lacks only 164 members of the number certified during the entire year of 1919.

A comparison of the individual county records with last year's figures shows that 40 counties are one hundred per cent.—have certified memberships equal to or greater than those of 1919. These counties are set in black type. The seven counties designated by the asterisk should really be included in the one hundred per cent. class although they have not succeeded in equalling their 1919 records. Their failure to qualify is due to the fact that former members have died or removed from the county and no new physicians have taken their places.

Considered by councilor districts, the present

membership record is particularly pleasing. In the First District, seven of the nine counties are one hundred per cent., the remaining two are in the asterisk class, and the total enrollment for the district shows a gain of 17 members over last year's figure. The Eighth District has exactly equalled its 1918 certification, although three of the nine counties are yet without the one hundred per cent. fold. The Ninth District, lacking only one of the number required to qualify, will probably have done so before this issue reaches you. The Second District needs 11 members to bring it to the last year's standard, while the other districts have deficits ranging from 23 to 33.

Invitations to the annual luncheon of the One Hundred Per Cent. Club, to be held at the Elks' Club in Toledo on June 2, have been issued to officers of the one hundred per cent. counties, and will be mailed to those of other counties as rapidly as they qualify. The shortages in every instance are so small that with a little extra effort on the part of the officers and members in these counties they can easily be covered by June 1, thereby making possible a one hundred per cent. Association.

### First District

Robert Carothers, M. D., Cincinnati—Councilor

County	Membership	
	1919	1920
*Adams .....	20	17
Brown .....	12	13
Butler .....	69	73
Clermont .....	19	20
Clinton .....	25	26
Fayette .....	12	14
Hamilton .....	473	488
Highland .....	25	25
*Warren .....	30	26
	685	702

### Second District

J. E. Hunter, M. D., Greenville—Councilor

County	Membership	
	1919	1920
Champaign .....	28	24
Clark .....	70	67
Darke .....	47	46
*Green .....	41	40
Miami .....	41	32
Montgomery .....	167	175
Preble .....	21	18
Shelby .....	18	20
	433	422

### Third District

R. R. Hendershott, M. D., Tiffin—Councilor

County	Membership	
	1919	1920
Allen .....	82	78

*Auglaize .....	32	30
Hancock .....	37	38
Hardin .....	23	23
Logan .....	41	39
Marion .....	53	54
Mercer .....	30	25
Seneca .....	31	26
Van Wert .....	31	25
Wyandot .....	9	8
	369	346

### Fourth District

John G. Keller, M. D., Toledo—Councilor

County	Membership	
	1919	1920
Defiance .....	12	13
Fulton .....	22	26
Henry .....	23	24
Lucas .....	258	251
Ottawa .....	13	13
Paulding .....	20	20
Putnam .....	30	28
Sandusky .....	33	29
Williams .....	32	23
Wood .....	44	37
	497	464

### Fifth District

R. K. Updegraff, M. D., Cleveland—Councilor

County	Membership	
	1919	1920
Ashtabula .....	40	39
Cuyahoga .....	548	528
Erie .....	35	31

Geauga .....	7	8
Huron .....	21	25
Lake .....	25	25
Lorain .....	69	68
Medina .....	24	18
Trumbull .....	43	43
	<hr/> 812	<hr/> 785

### Sixth District

E. J. March, M. D., Canton—Councilor

County	Membership	
	1919	1920
Ashland .....	23	22
Holmes .....	11	12
Mahoning .....	121	116
Portage .....	27	28
Richland .....	54	54
Stark .....	128	133
Summit .....	196	170
Wayne .....	30	29
	<hr/> 590	<hr/> 564

### Seventh District

J. S. McClellan, M. D., Bellaire—Councilor

County	Membership	
	1919	1920
Belmont .....	58	56
Carroll (with Stark Co.) .....		
Columbiana .....	77	67
Coshocton .....	23	19
Harrison .....	15	11
Jefferson .....	52	48
Monroe .....	9	7
Tuscarawas .....	46	42
	<hr/> 280	<hr/> 250

### Eighth District

A. B. Headley, M. D., Cambridge—Councilor

County	Membership	
	1919	1920
Athens .....	50	52
Fairfield .....	38	34
Guernsey .....	26	27
Licking .....	45	44
Morgan .....	11	14
Muskingum .....	54	55
Noble .....	10	10
Perry .....	22	22
Washington .....	36	34
	<hr/> 292	<hr/> 292

### Ninth District

J. S. Rardin, M. D., Portsmouth—Councilor

County	Membership	
	1919	1920
Gallia .....	24	26
Hocking .....	9	10
Jackson .....	20	20
Lawrence .....	29	31
Meigs .....	13	13
*Pike .....	12	10
Scioto .....	57	54
Vinton .....	6	5
	<hr/> 170	<hr/> 169

### Tenth District

Wells Teachnor, M. D., Columbus—Councilor

County	Membership	
	1919	1920
*Crawford .....	37	35
Delaware .....	30	21
Franklin .....	357	343
Knox .....	31	29
Madison .....	20	19
Morrow .....	12	12
Pickaway .....	27	24
Ross .....	34	38
*Union .....	21	20
	<hr/> 569	<hr/> 541
Grand Total.....	4697	4534

### Casualty Rates In World War

The final revised figures of casualties in the war show the total to have been 302,612. Of this number Ohio suffered 16,007, of whom 4082 died. This amounted to 3.3 casualties per thousand of population, and shows Ohio well up toward the top of the list in that regard.

The greatest number of casualties per thousand of population was sustained by Montana. That state has 3443 wounded, with 934 deaths. This amounted to 9.1 per thousand of her population. Florida's losses were the least, amounting to 1.27 per thousand of population.

New York, with the greatest number of troops in the field, naturally suffered heaviest in the total number of casualties and deaths. The former amounted to 40,222 and the deaths to 9196. This was at the rate of 4.4 casualties per thousand of population. Pennsylvania had 35,042 casualties and 7898 deaths, amounting to 4.5 per thousand of population.

The states suffering less than two casualties per thousand of population were Indiana, Arkansas, Georgia, Delaware, Louisiana, Mississippi and Florida. The reason for the small casualty list in the Southern states was no doubt due to the fact that their quotas contained so many colored troops and these troops were not on the fighting line so much as were white troops.

The states suffering a greater loss than four per thousand of population were Montana, Connecticut, Wyoming, Pennsylvania, North Dakota, New York, Wisconsin, Idaho, Massachusetts and New Jersey.

### Speech Correction Movement Grows

Dr. Walter B. Swift of Boston, has just completed the training of a second set of speech correction teachers for the Cleveland public schools. The speech correction movement was initiated in the Cleveland schools more than a year ago under Dr. Swift's direction and has met with marked success. It is rapidly spreading over the entire country and there are at present 567 teachers trained in the method being used at Cleveland, with capacity for treating 125,000 cases a year.



## Health Insurance from the Standpoint of the Physician

(Editorial Note)—The following article by Dr. C. J. Whalen, editor of the Illinois Medical Journal, and a nationally known student of the subject of health insurance, is especially interesting as an analysis of the probable effect of such a system on the practice of medicine. The comparative death rates of this country and those of foreign countries which maintain systems of state health insurance are convincing from the standpoint of public health and public welfare.

Health insurance from the standpoint of the physician has a direct bearing upon public health because of the fact that wherever it has been tried it has stopped all medical progress, as shown by Dr. E. H. Ochsner, and has brought about the worst imaginable form of medical service. Poorly equipped doctors and inferior medical service are necessarily potent factors in keeping up the morbidity and mortality rate of the community. In Germany and Austria, where health insurance has been in vogue for thirty years or more, the quality of the German and Austrian medical men has so deteriorated and the people get such poor medical service that the lowering of mortality and morbidity in these countries has not kept pace with America and other countries not having health insurance laws.

Compulsory health insurance has crushed the independence and enthusiasm out of the German profession to such a degree that each year men of real ability are studying medicine in smaller and smaller numbers.

Thirty years ago Germany and Austria were leaders in the science of medicine. Today they take a place away down in the scale. It has been authoritatively demonstrated (Dr. E. H. Ochsner) that the medical men of the first magnitude in both Germany and Austria today, under forty years of age, can be counted on the fingers of one hand, and this in a population of one hundred and forty millions.

In countries not cursed by compulsory health insurance progress has been steadily upward. America, for instance, has taken the place previously occupied by Germany and Austria, before they established health insurance.

Because it has stopped scientific medical progress, as it has in Europe, by destroying the incentive for research and individual excellence, it is undesirable to the public, by whom the effects of insufficient service would be most keenly felt. In other words, where medical progress is retarded, the physical welfare of the community is jeopardized.

As illustrating the kind of medical service that is given under a compulsory health service, I call your attention to the working of the law in England. Brend in his book, "Health and the

State," says that no one aside from the panel doctor is satisfied with the working of the English law. The German law was a practical failure. The English is worse. It fails to provide competent care for those needing it. Some investigation showed that for making diagnosis, writing prescriptions, making records, a panel doctor averaged three and one-quarter minutes per patient.

Health insurance laws, wherever tried, have demoralized the medical profession, and this necessarily reacts to the detriment of the public health. Friedensburg, formerly head of the German Insurance Office, in his work, "Practical Results of Workingman's Insurance in Germany," says the demoralization of the medical profession is one of the most unfortunate by-products of the European social insurance system. The evidence shows there is constant strife between physicians and the carrier association. Evidence, too, shows there has been sudden prosperity of those physicians who have catered to the whims of the insured who practice malingering and the utter ruin of doctors who have held their professional standing above the demands of the masses for unearned benefits and pensions. The evidence, too, shows discontent and dissatisfaction among physicians, culminating in strikes, and again in the refusal of the best men to allow their names to go on the panels. As a result the insured get only inferior medical service. In other words, the least efficient doctors will make the most money, and from the standpoint of the people the services will become deteriorated.

A physician who has the reputation of being "generous" in his diagnoses is certain of a host of patients, and the courts of honor of the medical profession have repeatedly been forced to interfere, since this generosity has led to a suspicious disturbance of scientific knowledge. A melancholy counterpart is furnished by the numerous cases in which a physician of probity renders an expert opinion unfavorable to the pension claimant, begging that the claimant in question be kept in ignorance of this opinion, since otherwise the physician concerned would lose his practice, while his neighborhood would be made too hot to hold him.

Another phase of the medical problem is the fact that it would represent the first case in history of a compulsory trades union. No physician could serve, unless he joined a local panel, and received his credentials as a panel or union physician. His union, however, could not get a charter from the American Federation of Labor, because that organization makes its own laws and rules, and its subdivisions regulate their charges for service, while the panel physician could not say when or where he would work, or how much he

would charge. The State Commission would fix his pay, the medical directors of the carrier associations would say when his patients were sick and when they had recovered, and the carrier associations would dispute his charges. His efforts to prevent fraud and malingering would gradually set up a boycott against him as an unfair physician. He would have to have under his care, and call upon daily, every day of the year, twelve patients, in order to make a bare living, and in order to do that he must be certified by the medical director, certified by the patient, audited and disputed by the carrier associations, and waste time arguing his appeals before the commission.

From a public health standpoint the justification of the expenditure of seventy million dollars annually in Illinois would not warrant the enactment of a compulsory health insurance law unless it can be shown that such a measure would materially lessen the morbidity and mortality.

I am able to show that the alleged improvement in health will not materialize. It will not remove the cause of illness, nor will it reduce the number of cases or the average length of disability, and I have but to refer to existing records or similar schemes in Europe to prove this assertion.

More Germans die or lose time by sickness, under health insurance, than Americans.

Not only do the wage-earners of Germany and Austria lose more time through sickness under compulsory health insurance laws than in the United States without such laws, but it also is interesting to note that it has produced in the habits of German and Austrian workers a tendency to become sick, to imagine they are sick, or to make believe they are sick. The figures are illuminating. In Germany out of every 100 insured wage-earners, 36.7 were listed as sick in 1890, and 45.6 in 1913; in Austria the corresponding figures were 45.7 in 1890, and 51.8 in 1913. In Germany the average number of days of sickness for each sick member increased from 16.2 in 1890 to 17.4 in 1913. The average number of days of sickness per insured member, which was 5.9 in Germany in 1885, when the law had just gone into effect, increased to 6.19 in 1890, and 9.19 in 1913, while the Austrian statistics from 1890 to 1913 show an increase from 7.98 to 9.45 days. Not only did the duration of sickness per person increase, but more persons were reported sick in Germany and Austria in 1913 than in 1890, showing that compulsory health insurance laws did not prevent sickness nor minimize its duration, and, therefore, did not promote efficiency.

#### LOWER DEATH RATE IN THE UNITED STATES

In 1912 the death rate in Germany was 15.6 per thousand population; in Austria, 20.5, and in Hungary, 23.3. Now compare these figures with the mortality rates in several countries which had no compulsory health insurance laws in ef-

fect. In the same year the death rate in Australia was 11.2; in New Zealand, 8.9; in Sweden, 14.2; in Switzerland, 14.1; in Belgium, 14.8; in Denmark, 13; in the Netherlands, 12.3, and in the United States, 13.9, which was further reduced in 1915 to 13.5.

This low rate was obtained in spite of the fact that the ordinary tendency to disease is aggravated by a great variety of climates in the United States, by diversity of races represented in our population, and the fact that the United States has kept its doors open to millions of immigrants unused to our change of climate, many of them physically wasted by toil and privations in their homeland.

#### WILL NOT DECREASE POVERTY

Under all the schemes for compulsory health insurance as yet proposed the persons most needing the insurance will not get it. Those who are out of work, except on account of illness, longer than the extension of one week for each four weeks during the previous 26 weeks of paid-up assessments; those who are unable to get into the voluntary insurance societies because they are unable to pass the medical examination, and those who are not insured because they are unable to get work on account of their age, alcoholism, shiftlessness, general incompetency, or any other disabling condition which prevents them from being employed in times of financial distress or panic—these unfortunate conditions will be greatly magnified.

Under the health insurance scheme the lot of the casual laborer would be grievously hard. It is axiomatic that the less a man earns per day the fewer days he works. Many cannot spare the amount necessary to pay the premiums continuously in order to receive the benefits. Therefore those who are unable on account of general incompetence, previous illness or any other disabling condition will be left outside the operation of this bill.

The proposed health insurance legislation does not make provision for the very poor, as such plans include the steady workers, a picked group, and not those who most need the insurance.

Moreover, the casual workers, the physical defective and the wage-earners above the insurable age who at present are able to provide for their own needs by at least part-time work, would by this bill be forced into involuntary idleness and consequent poverty.

#### WILL INCREASE POVERTY

Finally, I wish to emphasize that health insurance will not decrease poverty, but on the contrary will increase it by creating what might be called a human scrapheap.

In addition to these who constitute the present charity list will be added the 250,000 who, through physical unfitness or old age, will be



driven to involuntary idleness through the operation of this bill.

Age and physical condition would debar from steady employment and throw into the list of casuals, most of the work men over fifty-five years of age, which, figured at only 2 per cent of the covered wage-earners, would mean 48,000; add 10,000 mentally defective, 35,000 tuberculars, 100,000 venereals, and 60,000 chronics who are intermittently disabled, and you produce a scrap-heap of over 250,000 for the state or community to support or provide with employment, because every employer would be justified in demanding rigid physical examination of workmen. Necessarily the employer in order to keep his assessments low will carefully choose his employes, excluding by medical examination all who are not physically perfect, and the discard from these examinations will increase our already permanent pauper class.

Prevention is the antithesis of compulsory health insurance. It has often been claimed that a sickness insurance system creates an incentive for preventive work. The experience of the European countries does not support this contention. Indeed it is difficult to see any logical ground for the claim; a clear appreciation of the extent of sickness and disability and the heavy burden which they place upon society should be the sufficient and powerful incentive for prevention. Insurance is not the solution of the problem. If interest in prevention can be aroused through an insurance system it should be much more sharply stimulated by an organized program having prevention for its chief object.

Disability as contemplated under compulsory health insurance arises largely from carelessness, recklessness, intemperance, use of drugs, and personal vice and immorality. Laxity in applying the laws governing communicable diseases, housing conditions, water supply, food inspection, drainage, streets, alleys and yards and smoke and gas-polluted air.

Most dentists agree that 80 per cent of adults would have comparatively good teeth, instead of 90 per cent of them having bad teeth, if the teeth were looked after regularly from childhood. Sixty per cent of all sickness is preventable. It would seem then that the logical and economic thing to do would be to strike at the root of this social evil by setting up a system of conservation.

All sickness and disability which can reasonably be prevented should be prevented instead of being allowed to remain unremedied until they impose a burden of misery and poverty on the individual and a burden of cost on society.

*Pope's Manual of Nursing Procedure*, by Amy Elizabeth Pope, formerly instructor in the School of Nursing, Presbyterian Hospital, New York, Visiting Instructor, San Francisco, Calif. Price \$2.40. G. P. Putnam's Sons, New York City.



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# MEDICAL COMMENT ABSTRACTS AND CURRENT TOPICS OF INTEREST

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## Some Observations On Pruritus Ani

**S**PEAKING before the last meeting of the American Proctologic Society, 1919, Dr. Terrell stated that during the past seven months he had examined forty-four patients with pruritus ani. In thirty-nine of these small infected sinuses were found at or just beneath the ano-rectal line, and from these a small probe, bent at an acute angle, was found to pass downward under the skin of the affected parts. A careful and painstaking inspection of every part of the anal canal is necessary in locating these sinuses, and Dr. Terrell has found the "Physiological Anal Speculum," devised by Dr. F. P. Nourse of Lewiston, Idaho, the best instrument for this purpose. In the severe cases of pruritus from three to four sinuses were found, but in the milder localized cases not infrequently only one sinus was found. It is the opinion of the author that the irritation from one sinus involves not more than one-fourth of the circumference of the anus.

The treatment consists in opening the sinuses from above downward, under local anesthesia, using a bent probe as a guide. Twenty-five cases have been operated on by Dr. Terrell, after this manner, with complete relief of the symptom when the parts had healed.

## Vaccine Treatment for Pruritus Ani: Possible Reasons for Failures with Stock Vaccine

**R**EADERS of the Journal O. S. M. A. will recall the report of Dr. J. M. Frick, of Toledo, on his successful use of Autogenous Vaccines in Pruritus Ani as well as his allusions to the pioneer work of Dr. Dwight H. Murray along this line. At the Atlantic City meeting of the American Proctologic Society, Dr. Murray said that Pruritus Ani was always a disease most stubbornly resistant to all kinds of treatment, and that it was now nine years since he had established to his own satisfaction that the etiological cause was the streptococcus fecalis, and that since then he had found practically 100% of the cases were the result of this infection. His theory was at first met by the usual crop of unbelievers, but since this many have acknowledged its correctness.

He used autogenous vaccines with marked success in lessening the intensity and frequency of the itching and has cured most cases, and has used stock vaccines with less success. Complicating infections, such as staphylococcus aureus and bacillus coli, may require mixed vaccines for complete relief.

The extreme difficulty of having bacteriologic work done in most places make a stock vaccine most desirable. Four years ago one commercial house put out such a vaccine for experimental purposes, but the reports on its use did not show sufficient successes to warrant marketing the product. Yet some reports received by Dr. Murray from men who had experimented with this firm's vaccine, were distinctly favorable.

Dr. Murray's conclusion as to the comparative value of autogenous vaccines are as follows:

1. Stock streptococcus faecalis vaccine is not quite as efficacious as autogenous vaccine.
2. Failure to get relief is possibly the fault of the operator, or because of a complicating infection, and should have further bacteriological investigation.
3. Large doses are innocuous so far as by-effects are concerned.
4. It is a mistake to fill the mind of the patient with doubt as to the efficacy of the treatment or the ability of the physician in charge even though he has had little or no experience.
5. Correction by operation of local pathology present with Pruritus Ani will not relieve the itching, when an infection of the skin is present.
6. The presence of local pathology with Pruritus Ani is coincident.
7. Stock vaccine should be made and supplied to the profession with the understanding that relief is not promised in any sense, but is expected.
8. Investigation and failures are good things and beget our earnest and careful efforts to find the truth.
9. Neither an investigator nor his work can be considered the last word, and for this reason we should all work together without bias to the end that the best results of treatment may be found for these unfortunate sufferers.



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## DEATHS IN OHIO

*Martin Freidrich, M. D.*, Western Reserve University School of Medicine, Cleveland, 1894; aged 64; Fellow of the American Medical Association; member of the Ohio State Medical Association; the American Public Health Association, the American School Hygiene Association, American Association for the Study and Prevention of Tuberculosis; died at his home in Cleveland, April 8, after an illness of several months. Born in Bavaria, Dr. Freidrich received his early education at the University of Munich and at Paris, coming to America at the age of 27 years. In 1909 Dr. Freidrich was appointed health officer of Cleveland and has been connected with the department ever since, serving at the time of his death as director of the Bureau of Communicable Diseases. He was a pioneer in the enforcement of sanitary laws and was known as the original "fresh air" advocate. The city bacteriological laboratory was established as the result of his efforts. In his death the city of Cleveland loses a most progressive citizen and the medical profession a valuable and esteemed member, known throughout the middle-west for his health promotion activities.

*Ezra C. Harris, M. D.*, Starling Medical College, Columbus, 1876; aged 75; died at his home in Springfield, April 17. Dr. Harris was a practicing physician in Springfield for 30 years, having moved to that city from Clifton. He was a veteran of the Civil War. Surviving are a son and two daughters.

*Christopher P. Linhart, M. D.*, Western Reserve University School of Medicine, Cleveland, 1881; aged 59; member of the Ohio State Medical Association; died at his home in Columbus, April 15, from pneumonia. Dr. Linhart had practiced in Columbus for more than 20 years, specializing in diseases of the eye, ear, nose and throat. He was formerly physical director at Ohio State University and at the time of his death was medical inspector of the Columbus public schools. His widow, two daughters and a son survive.

*John Peter Marshall, M. D.*, Jefferson Medical College of Philadelphia, 1908; aged 37; Fellow of the American Medical Association; member of the Ohio State Medical Association and the American Academy of Ophthalmology and Oto-Laryngology; died at his home in Warren, April 4, from general septicaemia following otitis media. Dr. Marshall was a resident of Warren for seven years, coming to that city from Mt. Alto Pennsylvania. He leaves his wife and two small children.

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## MEETINGS OF THE CLEVELAND ACADEMY OF MEDICINE

(Lester Taylor, M. D., Secretary)

The 161st regular meeting of the Academy of Medicine of Cleveland was held April 16 in the Auditorium of the Cleveland Medical Library Association, the president, Dr. R. H. Birge, in the chair.

Dr. Israel Strauss, associate attending neurologist and associate in neuropathology at Mt. Sinai Hospital, New York City, presented a paper on "Lethargic Encephalitis." He first outlined the pathology of this disease, and then gave a very complete and graphic clinical picture. The different forms and complications were portrayed with a wideness that made us almost see the patient. A brief discussion of the treatment was followed by a report on Dr. Strauss' experimental work on the causative factor of this type of encephalitis. He reported the isolation of an organism from a filtrate of the washings of the nasal mucosa; also from the nasal mucous membrane of fatal cases. The disease was produced experimentally in rabbits and the organism recovered from the animals. This research was demonstrated with lantern slides. The paper was discussed by Drs. C. F. Hoover and R. K. Updegraff.

Attendance 78.

## COUNTY SOCIETY REPORTS

### FIRST DISTRICT

*Butler County* Medical Society met in Middletown, April 14, with 30 members present from Hamilton, Oxford, Trenton and Middletown, and several guests from Franklin and Lebanon. Dr. Allen Freeman, state commissioner of health, was the speaker of the occasion, and explained in detail the workings of the Hughes-Griswold health law.—News Clipping.

*Fayette County* Medical Society, in session at Washington C. H. on April 13, listened to an excellent address on "Diabetes" by Dr. J. H. J. Upham of Columbus. The scientific program was preceded by a 6 o'clock dinner.—News Clipping.

### SECOND DISTRICT

*Clark County* Medical Society had as its guest on April 12, Dr. Gilbert E. Robbins, health commissioner of Chillicothe and Ross County. In an exceptionally interesting address on "Why the Dull Market for Public Health," Dr. Robbins emphasized the fact that public health is purchasable and that any city may determine its own death rate by the amount of money it is willing to spend for disease prevention. He outlined the work being done by his department in the in-



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spection of dairies and public eating places, which met with the hearty approval of Dr. R. R. Richeson, new health commissioner for Springfield and Clark County, and other members present.—News Clipping.

*Darke County* Medical Society held one of the most interesting meetings it has had for years at St. Clair Memorial Hall, Greenville, on April 8. The excellent program consisted of papers by Dr. Walter G. Stern of Cleveland on "Some Problems in Reconstruction and Casualty Surgery;" Dr. Hugh G. Beatty of Columbus on "Cleft Palate;" Dr. Gordon F. McKim of Cincinnati on "Case Reports, with Special Reference to the Kidney;" and Dr. Halbert B. Blakey of Columbus on "The Late Effects of Influenza." Attendance numbered 35, including essayists and guests.—B. F. Metcalfe, Correspondent.

*Preble County* Medical Society met in monthly session at Eaton on April 27. Dr. Warren C. Breidenbach, superintendent of Stillwater Sanitarium, near Dayton, maintained jointly by Montgomery and Preble Counties, for the treatment of tuberculosis, was present and gave an excellent talk on that subject. He stated that one in seven or eight die of tuberculosis and that every one who dies of this disease infects, on average, four persons. He declared that not only is tuberculosis preventable, but it is curable in the early stages, and that anything which reduces the vitality, like catarrhal troubles, diseased tonsils or teeth, typhoid, pneumonia, malnutrition, etc., makes the system more susceptible to tuberculosis.—News Clipping.

#### THIRD DISTRICT

*Allen County* Medical Society met in regular session at Lima, April 20. In the absence of president and secretary, Vice-president V. H. Hay presided and appointed Dr. Edward Curtiss secretary pro tem. Dr. Shelby Mumaugh read a practical paper, of unusual interest, on the subject "The Art of Preserving Health," in which is discussed almost every phase of the prevention of disease by modern methods. Discussion was opened by Drs. Burton and Vail, followed by Drs. Jones, Sutter, Hover, Steiner, Johnson, Baxter, Rudy, Tussing, Stueber, Beauchamp, and closed by Dr. Mumaugh. Upon motion and vote of the society it was decided to have the paper published in each of the daily papers as a source of education to the public. Attendance, 24.

The bi-monthly meeting on May 4, was attended by 26 members. Dr. M. A. Wagner was the essayist and his subject "Industrial Surgery." Discussion by Dr. McGriff, followed by Drs. Thomas, Mumaugh, Stueber, Smith. Dr. Mumaugh reported a case of accidental injury to a boy of 12 years in injury caused by his being trampled by a horse, involved the lower middle third of the thigh. There was extensive laceration in a V shape, one side being about four inches long and the other about 6, which was properly sutured and antiseptically dressed. Great

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D. W. Brickley, J. W. McMurray, F. Young and John A. Dodd. The scientific program comprised papers on "Acute Purulent Otitis Media," by Dr. D. W. Brickley; "Professional Responsibility and Duty of the General Practitioner in the Conduct of the Mental Case," by Dr. C. E. Sawyer, and "Constipation," by Dr. H. J. Lower.—H. K. Mouser, Correspondent.

#### FIFTH DISTRICT

*Lake County* Medical Society held its 131st regular monthly meeting at the Parmly Hotel, Painsville, May 3. The paper of the evening was read by Dr. C. F. Hoover of Cleveland, on "High Blood Pressure, Its Cause, Significance and Treatment," which was followed by general dis-



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sloughing soon followed and at end of 20 days nervous symptoms developed which were generally conceded to be tetanus. Dr. Paul Steuber reported a case of anthrax. A lengthy discussion regarding fees followed, resulting in the appointment of a committee to confer and present a revised schedule at the next meeting.—A. S. Rudy, Correspondent.

*Marion County* Medical Society's regular monthly meeting was held at the Marion Public Library on April 6. Business transactions included the appointment of a committee to consider an increase in the fee schedule; authorization of the president to appoint a committee to promote the campaign against cancer during the week of May 9, which has been designated by the Committee on Control of Cancer of the State Association as "Cancer Week;" and appointment of a committee to assist in hospital matters. The latter committee consists of Drs. H. K. Mouser, cussion by Drs. A. P. Brady, Charles Quayle, T. M. Moore, H. E. York and W. P. Ellis. The next meeting will be held on September 6.—E. S. Jones, Secretary.

*Lorain County* Medical Society's session of April 13, held in Elyria, was a record breaker, both in attendance and excellence of program. After a short business session, we had the pleasure of listening to a wide-awake, up-to-date paper on "Pulmonary Tuberculosis," by Dr. H. C. King of Cleveland. The paper was enthusiastically received, at least 12 members taking active part in the discussion. Dr. C. O. Jaster of Elyria presented a very good paper on "Tuberculosis of the N. E. T." Dr. R. K. Updegraff, councilor for the Fifth District, was a guest at the meeting and gave an excellent talk on plans of the State Association, dealing particularly with the effect of legislative developments on medical practice in Ohio. The 27 members present agreed that the meeting was the best ever held by the Society.—R. A. Pease, Secretary.

#### EIGHTH DISTRICT

*Fairfield County* Medical Society met in regular session at the Lancaster Municipal Hospital, April 20. A symposium on "Focal Infections" featured the program. Dr. C. G. Axline discussed the general phases of focal infections; Dr. James M. Lantz treated the subject from the standpoint of eye, ear, nose and throat work, and Dr. Phil Floyd, a local dentist, took up the dental phases. The papers brought out many valuable points which were freely discussed. A luncheon and smoker followed the business meeting.—C. H. Hamilton, Secretary.

*Muskingum County* Medical Society held its regular monthly meeting at the Hotel Clarendon, Zanesville, April 7. Following a five-course banquet the scientific program was given. Dr. T. L. Sutton spoke on "The Advantages of Testing the Renal Functions," and Dr. C. J. Roach on "Artificial Feeding of Normal Infants." Both papers were thoroughly discussed. Dr. J. R. McDowell

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of the State Department of Health spoke on the advisability of opening a clinic for the treatment of venereal diseases in Zanesville and after thorough discussion the society unanimously indorsed the project.—D. J. Matthews, President.

#### NINTH DISTRICT

*Gallia County Medical Society's* meetings during the past winter have been held at Holzer Hospital with increased attendance and interest. At the last meeting, April 8, Dr. J. S. Biddle read a paper on "Asthma," emphasizing different types of this disease according to cause. Dr. Leo C. Bean in opening the discussion made the point clear that the true type of bronchial asthma has a peculiar sensitiveness in different individuals to particular proteins, is of diagnostic importance.—Milo Wilson, Secretary.

*Scioto County Medical Society,* meeting in Portsmouth on April 12, enjoyed an instructive address by Dr. G. G. Giffin of Dayton, on the subject, "Prevention of Latent Venereal Manifestations." Dr. Giffin declared that "fifty per cent of all males have had an acute attack of gonorrhea; twenty-five per cent have had syphilis, and the proportion of men to women is 16 to 1. Continence does not undermine the manhood or the nervous system. Children should be taught the truth concerning their reproductive organs, to counteract their inquisitiveness later. man

does as he thinks; if he thinks clean thoughts, so does he." The discussion led by Dr. A. L. Test, was both lively and interesting. The meeting was well attended, with several visitors present.—Harry Rapp, Secretary.

#### State Medical Board Notes

John Menengay, Canton chiropractor, was recently convicted before Judge Krichbaum in the Probate Court at Canton for the illegal practice of medicine, and a fine of \$100 was imposed. Menengay, arrested on this charge in March, 1918, was convicted and took the case to the Court of Appeals, which has just confirmed the decision of the lower court. A second charge against Menengay is now pending but is held temporarily in abeyance until decision is rendered by the Court of Appeals sustaining the State Medical Board in the prosecution of such cases.

—Affidavit was filed in the Probate Court of Stark County on May 4 against Mrs. Erato Zachartos, Canton, for the illegal practice of midwifery.

—Mrs. Helen Platz, Cleveland, was arrested a second time for the illegal practice of medicine on April 30. Mrs. Platz, an "ouija" specialist, was first arrested in October, 1919, found guilty and fined.

—C. M. Gillum (colored), Cleveland, has been arrested for the illegal practice of medicine and his case set for hearing on May 7 in the Municipal Court. Gillum is a partner of A. B. Foster (herb doctor), who was recently convicted on a similar charge.

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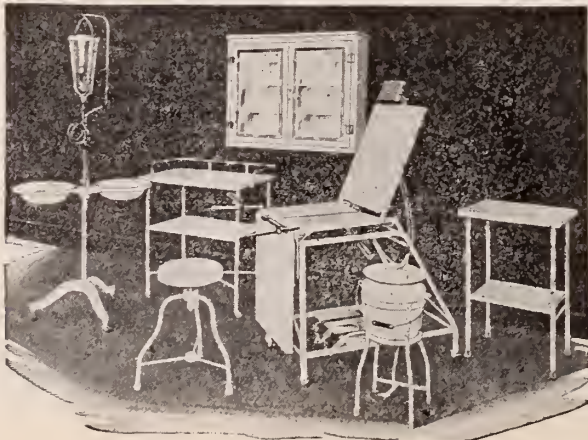


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## OHIO HOSPITAL NOTES

The contention that nurses who contract infectious or contagious diseases in the performance of their duties at hospitals, should partake of the benefits of the Workmen's Compensation Act, was presented to the State Industrial Commission by Howell Wright, secretary of the Cleveland Hospital Council, at a recent meeting.

—A home vaudeville entertainment given for the benefit of Defiance Hospital by local women netted over \$3,200.

—On account of crowded conditions at the Charles S. Gray Deaconess Hospital, Ironton, a plan is being considered by the board of control to purchase or build a home for nurses.

—The report presented to commissioners of Clark, Champaign, Green and Madison Counties, April 7, by Dr. R. R. Richison, superintendent of the district tuberculosis hospital maintained



Greenfield Hospital, pictured above, is one of the few small hospitals of the state that has been a financial success in the first year of its operation. It recently observed its first anniversary.

by these counties, for the fiscal year ending April 1, showed a commendable widening of the scope of work of the institution. The per diem cost of caring for patients was reduced from \$2.11½ in the previous year to \$1.63, through a doubling of the number of patients admitted.

—A \$3,000 increase in the yearly appropriation for the district tuberculosis hospital operated by Allen, Van Wert, Auglaize, Mercer and Shelby Counties, will doubtless result in the erection of additional quarters for the care of patients in the near future.

—A \$3,500,000 bond issue for a new city hospital in Cleveland carried in the April primary with a comfortable margin over the necessary two-thirds vote. Tentative plans for the new institution call for the abandonment of 400 of the 800 beds at present used at the city hospital. New buildings will accommodate 1,088 beds making a total of 1,488 or 688 more beds than are now available.

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## "School Merger Is Advocated to Reduce Number of Deans; Fall of Homeopathy Is Noted"

Under the above two-column heading, the *Cincinnati Enquirer* published the most recent recommendations made by William H. Allen of the New York Institute of Public Efficiency to the joint legislative committee on administrative reorganization. Dealing as it does with medical colleges and courses of instruction under state supervision, the article in the *Enquirer* is reproduced below:

"Reductions in the number of deans through reduction in the number of separate colleges at Ohio State University is advocated by William H. Allen, who has been making a study of the institution for the Joint Reorganization Committee of the Ohio General Assembly.

"It is expected that new life will be injected into the controversies already raging over the proposed changes at the university by the later reports, earlier ones having the faculty on tip-toes.

"The outstanding recommendations are that the College of Homeopathic Medicine and the College of Pharmacy be incorporated in the College of Medicine, and that the College of Veterinary Medicine be merged with the College of Agriculture for purposes of administration.

"The Homeopathic recommendation is expected to stir up the physicians of that practice despite their growing scarcity. Mr. Allen, however, points out that if there are fewer deans higher salaries may be paid to them. Discussing the situation in part, he says:

"In suggesting that the college of homeopathic medicine be merged with the college of medicine it is recalled that already the principle of merging has been frankly recognized. Already the great majority of subjects needed for medical practice are taught for both colleges by the college of medicine, for example, anatomy, bacteriology, obstetrics, physiology, surgery, etc.

"For only two reasons can a separate college of homeopathic medicine be urged; one, that the medicines which it prescribes are different either in character or quantity or both, the other that homeopathy has a distinguished past which should be preserved in name and organization.

"Whatever distinction there is between the teaching of medicine in the college of homeopathic medicine and the teaching of medicine in the college of medicine can easily continue to exist under one college with provision for separate instruction in homeopathic medicine. This would

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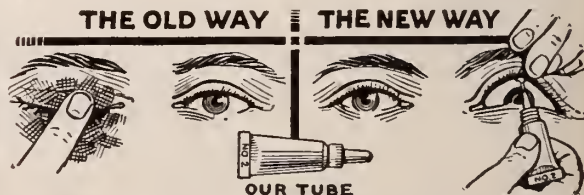
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"In the year 1818-1920 there were but 21 Ohio residents registered at the college of homeopathic medicine, seven from Franklin county, four from Cuyahoga, two from Montgomery, and one each from Champaign, Darke, Greene, Hamilton, Henry, Lake, Medina, Washington, and none from 77 Ohio counties.

"In the four years from September, 1913, through June, 1917, there were 29 Ohio graduates from 13 counties, and none from 75 counties. Yet there is a special college, a special dean, special office overhead, a special hospital.

"If homeopathy were a new and growing sect, if it represented some new principle which the world was bound to adopt, it would be progressive of a state like Ohio to give it a chance and to back it during its "infant industry" days. But that is not the case with homeopathic medicine.

"In the year 1918, in all the country, there were 540 students registered in the six homeopathic colleges and 114 graduates. This is a decrease in students since 1900 of from 909 to 540 and in graduates from 413 to 114. This condition is no news to followers of homeopathy. At the annual national convention held in Cincinnati in the autumn of 1919, the future of that school of medicine seemed so alarming that a recruiting program was adopted. In the medical profession it is almost universally doubted even among homeopathic physicians themselves whether propaganda or money can ever restore to homeopathy a numerically significant position.

"All of this was known to the world when the Ohio State University as recently as 1914, established its separate college of homeopathic medicine. Four years had passed since the Carnegie Foundation had proved "the ebbing vitality of homeopathic schools." In fact, the superiority of one college over two colleges of medicine was so well known that the proposal would unquestionably have been unanimously rejected if it had not been that it came with an offer of money from private sources. Repeatedly since its opening and in fact within the last few months private gifts have been made or announced. When now a question is raised about this separate college, university officers recall that the college has made influential friends and led to important gifts for the university.

"In spite of the gifts and even if private gifts

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should lead to many new buildings for homeopathic medicine and to other gains to the university, it is certain that the Ohio State University cannot afford to cut in two its interest in medical education, its program for training physicians and nurses, its responsibility for developing adequate hospital facilities, its training through hospital work, and its clinical resources and clinical training.

"Friends of the homeopathic school can surely be interested in what it is costing preventive medicine and other medical education to have a divided front here at the Ohio State University.

"Surely they cannot fail to see that neither money alone nor money coupled with the untiring effort of a special college can ever give homeopathy a lead or even a substantial following among the younger recruits."

### Education Combatting Malnutrition

Recognizing the fact that malnutrition among school children is one of the principle predisposing causes in the development of tuberculosis, the Cincinnati Anti-Tuberculosis League is actively co-operating with the local health department in the extension of malnutrition classes in the schools. This work has already been developed to a highly efficient point by the health department in a number of public schools and its benefits have been so evident that it is now planned to extend it to every public and parochial school in the city. Toward this end the Anti-Tuberculosis League recently authorized an expenditure of \$600.00 for the purchase of literature, charts and descriptive matter, together with standard scales with measuring rods, necessary to introduce the work into the parochial schools.

In some of the classes which have been organized children are listed whose weight is ten per cent. or more below the average for height. The general plan provides for careful diagnosis, correction of remedial defects and economic factors which have a bearing on the case, and the improvement of the personal hygiene and diet of the child. Classroom weight records are posted on the wall of the school room, spaced for names of nutrition class members, weights and heights by months for the school year. The query, "Are you gaining at least one-half pound per month?" is expected to keep the children busy working up to the normal, under proper instruction. The data is filled in by the children, which, too, creates wholesome rivalry in attainment of normal proportions. Parents of the children are invited to school to hear short talks on the subject of malnutrition, stressing at the same time the importance of early hours, sufficient sleep, cleanliness, regular bowel movements, eating slowly, and, above all, the proper kind and sufficient amount of food.

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## CORRECTED ROLL OF DISTRICT AND COUNTY SOCIETIES

Societies	President.	Secretary.
<b>First District..</b> F. M. Fitton, Hamilton.....Eric Twachtman, Cincinnati...Cincinnati, 1919		
Adams.....	Titus Stephenson, Winchester...	O. T. Sprouli, West Union.....3d Wednesday in April, June, Aug., Oct.
Brown.....	R. B. Hannah, Georgetown...	Geo. P. Tyler, Jr., Ripley.....4th Wednesday in Feb., May, and Nov.
Butler.....	James G. Graft, Trenton....	F. M. Fitton, Hamilton.....2d Wednesday, monthly
Clermont.....	A. B. Rapp, Owensville.....	F. H. Lever, Loveland.....3d Wednesday, monthly
Clinton.....	Robert Conard, Blanchester.....	Keiley Hale, Wilmington.....2d Thursday, monthly
Fayette.....	H. L. Stitt, Wash'gt'n, C. H.....	Lucy Pine, Washington C. H...1st Thurs., March, June, Sept., Dec.
Hamilton.....	H. Kennon Dunham, Cincinnati...	O. J. Seibert, Cincinnati.....Monday evening of each week
Highland.....	Lockhart Nelson, Hillsboro...	H. H. Lowe, Leesburg.....1st Wednesday in Jan., April, July and Oct.
Warren.....	S. S. Stahl, Franklin.....	Herschel Fisher, Lebanon....1st Tuesday in May, June, July, Sept., Oct. and Nov.
<b>Second District</b> H. B. Martin, Springfield .....E. R. Arn, Dayton.....Dayton, 1920		
Champaign....	D. C. Houser, Urbana.....	E. R. Earle, Urbana.....2d Thursday, monthly
Clark.....	R. C. Hebble, Springfield.....	R. W. Boehme, Springfield.....2d and 4th Monday each month
Darke.....	G. H. Harley, Hollansburg.....	A. F. Sarver, Greenville.....2d Thursday each month
Greene.....	M. I. Marsh, Cedarville.....	Reyburn McClellan, Xenia.....1st Thursday each month except October.
Miami.....	R. D. Spencer, Piqua.....	J. F. Beachier, Piqua.....1st Thursday each month
Montgomery...	E. H. Maliow, Dayton.....	G. G. Giffin, Dayton.....1st and 3d Friday each month
Preble.....	W. H. Tucker, Eldorado.....	S. P. Carter, W. Manchester...3d Thursday, monthly
Shelby.....	O. O. LeMaster, Sidney.....	Lester C. Pepper, Sidney.....1st Thursday, monthly
<b>Third District..</b> B. L. Good, Van Wert.....Austin S. McKittrick, Kenton..		
Alien.....	C. D. Gamble, Lima.....	E. C. Yingling, Lima.....1st and 3d Tuesdays
Auglaize.....	W. S. Stuckey, Wapakoneta...	C. L. Mueller, Wapakoneta...3d Thursday, monthly
Hancock.....	J. A. Kimmell, Findlay.....	Nelia B. Kennedy, Findlay...1st Wednesday, monthly
Hardin.....	D. H. Bowman, Kenton.....	W. A. Belt, Kenton.....1st Thursday, monthly
Logan.....	J. W. Croft, West Liberty.....	Carrie Richeson, Beilefontaine.1st Friday, monthly
Marion.....	C. W. Sawyer, Marion.....	Maude L. Bull, Marion.....1st Tuesday, monthly
Mercer.....	J. P. Simons, Rockford.....	D. H. Richardson, Celina....2d Tuesday, monthly
Seneca.....	C. F. Daniel, Tiffin.....	E. H. Porter, Tiffin.....3d Thursday, monthly
Van Wert.....	C. G. Church, Van Wert.....	N. E. Leake, Van Wert.....2d and 4th Monday, monthly
Wyandot.....	Frederick Kenan, U. Sandusky...	B. A. Moloney, U. Sandusky...1st Thursday, monthly
<b>Fourth District</b> (With Third District in Northwestern Ohio District)		
Defiance.....	J. J. Reynolds, Defiance.....	D. J. Slosser, Defiance.....2d Wednesday, bi-monthly
Fulton.....	C. F. Hartman, Wauseon.....	P. S. Bishop, Delta.....Semi-monthly
Henry.....	Charles Mowry, Napoleon.....	C. H. Skeen, Napoleon.....3d Wednesday, monthly
Lucas.....	E. W. Doherty, Toledo.....	J. F. Wright, Toledo.....Friday, each week
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore....2d Thursday, monthly
Paulding.....	L. R. Fast, Paulding.....	J. U. Fauster, Paulding.....3d Wednesday, monthly
Putnam.....	P. D. Bixell, Pandora.....	H. A. Neiswander, Pandora...1st Thursday, monthly
Sandusky.....	C. R. Pontius, Fremont.....	C. I. Kuntz, Fremont.....last Thursday, monthly
Williams.....	C. M. Barstow, Bryan.....	J. A. Weitz, Montpelier.....2d Thursday each month
Wood.....	J. C. Aurand, Weston.....	H. W. Dierksheide, Pemberville...2d Thursday, monthly
<b>Fifth District..</b> (No District Society)		
Ashtabula....	W. H. Leet, Conneaut.....	B. C. Eades, Conneaut.....2nd Tuesday, monthly
Cuyahoga....	R. H. Birge, Cleveland.....	Lester Taylor, Cleveland.....Every Friday evening
Erie.....	F. F. Lehman, Sandusky.....	F. J. Leblieq, Sandusky.....Last Thursday, monthly
Geauga.....	J. A. Heeley, Parkman.....	Isa Teed-Cramton, Burton...2d Thursday, Jan., March, July and Sept.
Huron.....	R. L. Morse, Norwalk.....	W. W. Lawrence, Norwalk....2d Thursday, monthly
Lake.....	W. P. Ellis, Painesville.....	E. S. Jones, Painesville.....1st Monday monthly



**Lorain**.....W. A. Pitzele, Lorain.....R. A. Pease, Lorain.....2d Tuesday, monthly  
**Medina**.....J. E. Waite, Lodi.....C. D. Freeman, Medina.....3d Wednesday  
**Trumbull**.....Walter W. McKay, Warren.....John D. Knox, Niles.....3d Thursday monthly except  
 June, July and August

**Sixth District**..John G. Wishard, Wooster...J. H. Seller, Akron.....2d Tuesday in February, Aug-  
 ust and November

**Ashland**.....C. C. Patton, Ashland.....W. M. McClellan, Ashland....1st Tuesday, Jan., March, May  
 July, Sept., Nov.

**Holmes**.....J. C. Elder, Nashville.....A. T. Cole, Millersburg.....1st Tuesday, monthly

**Mahoning**.....R. B. Dobbins, Youngstown...H. E. Patrick, Youngstown.....3d Tuesday, monthly

**Portage**.....S. U. Siron, Ravenna.....E. H. Knowlton, Mantua.....2d Thursday, monthly

**Richland**.....John Burns, Mansfield.....Chas. R. Keller, Mansfield....3d Thursday, monthly

**Stark**.....Perry King, Alliance.....George S. Hackett, Canton.....3d Tuesday, Jan. March, May,  
 July, Sept., Nov.

**Summit**.....D. W. Stevenson, Akron.....U. D. Seidel, Akron.....1st Tuesday, monthly

**Wayne**.....A. O. Smith, Wooster.....J. R. Jameson, Wooster.....2d Tuesday, Jan., April, July,  
 Oct.

**Seventh District**J. W. Collins, Toronto.....J. R. Mossgrove, Steubenville..

**Belmont**.....D. D. Piper, Shadyside.....J. S. McClellan, Bellaire.....2d Wednesday, monthly, at  
 1:45 p. m.

**Carroll**.....

**Columbiana**....P. C. Hartford, E. Palestine.....J. M. King, Wellsville.....2d Tuesday, monthly, alter-  
 nately, in Lisbon, Salem and  
 E. Liverpool.

**Coshocton**....Jesse McClain, Coshocton.....J. D. Lower, Coshocton.....4th Thursday, April, June,  
 Sept., Dec.

**Harrison**.....H. I. Heavilin, Cadiz.....R. P. Rusk, Cadiz.....1st Wednesday, monthly

**Jefferson**.....V. B. Di Loreto, Steubenville...J. R. Mossgrove, Steubenville.2d Tuesday, monthly

**Monroe**.....J. H. Pugh, Woodsfield.....2d Wednesday, monthly

**Tuscarawas**....H. A. Coleman, N. Philadelphia..E. D. Moore, N. Philadelphia..1st Tuesday, monthly

**Eighth District**J. G. McDougall, N. Lexington..Robert Miller, Hemlock.....

**Athens**.....J. M. Higgins, Athens.....T. A. Copeland, Athens.....1st Tuesday, monthly

**Fairfield**.....J. H. Axline, Lancaster.....C. H. Hamilton, Lancaster.....2d and 4th Tuesday, monthly

**Guernsey**.....Fred W. Lane, Cambridge.....F. M. Mitchell, Cambridge.....1st and 3d Tuesday each month

**Licking**.....C. J. Loveless, Granville.....W. E. Shrontz, Newark.....Last Thursday, monthly

**Morgan**.....C. V. Davis, Pennsville.....C. E. Northup, McConnelsville...1st Wednesday, monthly

**Muskingum**....D. J. Matthews, Zanesville.....Maurice Loebell, Zanesville....1st Wednesday, monthly

**Noble**.....G. H. Zimmerman, Belle ValleyJ. L. Gray, Caldwell.....1st Thursday, monthly

**Perry**.....F. J. Crosbie, Junction City.....C. B. McDougal, New Lexington3d Thursday, monthly

**Washington**...C. J. Scott, Marietta.....F. E. McKim, Marietta.....2d Wednesday, monthly

**Ninth District**.C. E. Holzer, Gallipolis.....Milo Wilson, Gallipolis.....Gallipolis, 1920

**Gallia**.....C. G. Parker, Gallipolis.....Milo Wilson, Gallipolis.....1st Wednesday, monthly

**Hocking**.....O. V. Donaldson, Gore.....M. H. Cherrington, Logan....

**Jackson**.....W. H. Parker, Wellston.....A. G. Ray, Jackson.....1st Tuesday, monthly

**Lawrence**.....T. H. Remy, Ironton.....E. E. Ellsworth, Ironton.....1st Thursday monthly

**Meigs**.....P. A. Jividen, Rutland.....L. A. Thomas, Middleport....1st Wednesday, April, July and  
 Oct.

**Pike**.....O. C. Andre, Waverly.....L. E. Wills, Waverly.....1st Monday, monthly

**Scioto**.....Wm. A. Ray, Portsmouth.....Harry Rapp, Portsmouth.....2d Monday, monthly

**Vinton**.....O. S. Cox, McArthur.....H. S. James, McArthur.....4th Wednesday, monthly

**Tenth District**.Ralph W. Holmes, Chillicothe..S. J. Goodman, Columbus.....Chillicothe, 1920

**Crawford**.....H. H. Hartman, Galion.....M. L. Helfrich, Galion.....2d Thursday, monthly

**Delaware**.....F. V. Miller, Delaware.....V. B. Weller, Chillicothe.....1st Friday, each month

**Franklin**.....C. W. McGavran, Columbus.....James A. Beer, Columbus....1st four Mondays

**Knox**.....H. W. Blair, Mt. Vernon.....J. R. Claypool, Mt. Vernon.....2d and 4th Wednesday, from  
 March to middle of Dec.

**Madison**.....G. M. Kerr, Lilly Chapel.....M. L. Naughton, London.....4th Thursday

**Morrow**.....R. L. Pierce, Mt. Gilead.....Carl E. Neal, Cardington.....1st Wednesday, monthly

**Ross**.....G. E. Robbins, Chillicothe.....G. S. Mytinger, Chillicothe.....1st Tuesday, monthly

**Union**.....H. G. Southard, Marysville.....F. C. Calloway, Marysville.....2d Tuesday

**Pickaway**.....J. B. May, New Holland.....D. V. Courtright, Circleville....1st Friday, monthly

## NEWS NOTES OF OHIO

*Fairport Harbor*—Dr. C. W. Emmons, a resident of this city, has moved to Lakewood, where he has leased the residence and offices formerly occupied by Dr. C. Lee Graber.

*Cincinnati*—Drs. Byron Stanton, Stephen C. Ayres, John C. MacKenzie and A. O. Mathews have been made honorary members of the Cincinnati Academy of Medicine. Dr. Stanton has been a member of the academy for 63 years.

*West Liberty*—Dr. G. E. Davis has moved from this city to West Mansfield.

*Columbus*—Dr. Mary Stone, head of the Danforth Memorial Hospital at Kiukiang, China, addressed the annual district meeting of the Women's Foreign Missionary Society in this city recently. Dr. Stone, a Chinese girl, received her medical education at the University of Michigan and Johns Hopkins University, and with a sister, Dr. Phoebe Stone, conducts a home for cripples and a training school for nurses in connection with the hospital at Kiukiang.

*St. Henry*—Dr. C. J. Schirack, a former practitioner of this city, has opened offices in Canton, where he is limiting his practice to eye, ear, nose and throat.

*Dayton*—Mrs. Frances Dolina, wife of Dr. J. F. Dolina, died suddenly at her home, April 14.

*Port William*—Dr. J. B. H. Waring of Richmond, Virginia, has moved to this city and is occupying the former offices of Dr. H. L. Senseman, who has moved to Dayton. Dr. Waring has had extensive Army service and has recently engaged in post-graduate work in Chicago and New York.

*Oberlin*—Dr. Charles W. Carrick of this city and Miss Dorothy Dodridge were married at Berea recently.

*Caldwell*—Dr. R. H. Cleary has resigned as local examiner for the War Risk Insurance Bureau.

*Urbana*—Dr. J. F. Shultz has announced himself as a candidate for nomination as coroner of Champaign County, subject to the Republican primary in August.

*New Philadelphia*—Local physicians have placed in effect a revised fee schedule in which calls have been increased from \$2.00 to \$3.00, and night calls from \$3.00 to \$5.00, with proportionate increases in other items.

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We offer the professional services of these gentlemen to medical men. Any questions along the lines of their endeavor will be gladly answered. In addition to the research work, which is being carried on in various branches of science, our staff is abundantly able to give physicians practical suggestions in all that relates to lues and its treatment.

Correspondence with physicians is invited, and will be welcome as we are anxious to demonstrate our desire to cooperate with them in every possible way.

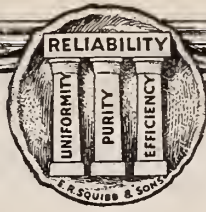
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especially of Type I, (Lobar Pneumonia)

**Anti-Pneumococcic Serum** is of great value. It should be used early in large quantities and full doses repeated every six hours until the crisis is passed; also **Anti-Streptococcic Serum** is important for pneumonia in addition to anti-pneumococcic serum. It is best not to use the two mixed, but to administer each separately as the symptoms and bacteriological findings demand.

Anti-Streptococcic Serum Squibb is useful also in post-partum or puerperal sepsis, in erysipelas, and for septic conditions due to wounds infected with streptococci.

### For Increasing Phagocytosis in Sepsis

**Leucocyte Extract** is of paramount importance, either in conjunction with vaccine and serum, or alone if the exact pathogenic microorganism can not be determined.

### For the Prevention and Cure of Diphtheria

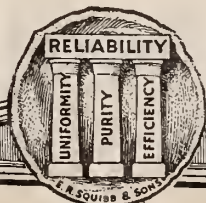
**Diphtheria Antitoxin (Globulin)** yields desired results. It is small in bulk for the number of units contained.

### For the Prevention of Small-Pox

**Small-Pox Vaccine** is the trustworthy prophylactic.

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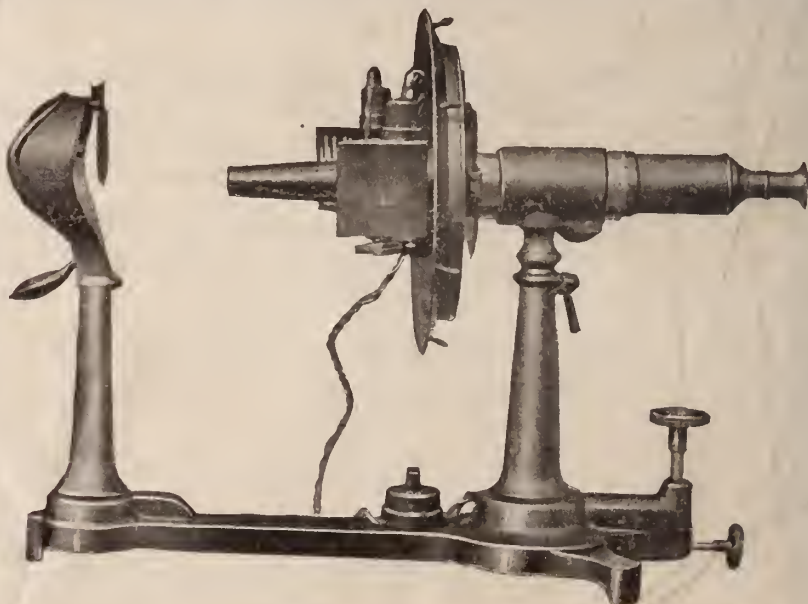
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# Ohio State Medical Journal

Published monthly by

THE OHIO STATE MEDICAL ASSOCIATION  
131 East State Street, Columbus, Ohio

Telephones: Ohio State 4905; Bell Main 5259

This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.

Issued under the direction of the Publication Committee.

## Officers of the Ohio State Medical Association

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## EDITORIAL COMMENT

by D. K. M.

### Annual Meeting In Retrospect

From the standpoint of scientific programs, the value of the general sessions, the entertainment features, and particularly the harmony and unanimity of sentiment on important matters of policy, the Seventy-Fourth Annual Meeting of the Ohio State Medical Association in Toledo, on June 1, 2, and 3, was singularly successful.

From those in attendance at each of the scientific sections has come the expression that from a scientific standpoint, the papers were regarded as a distinct forward step in medical practice. The symposium on goitre at the last session on the third morning of the meeting likewise received hearty commendation.

The various section officers and the local committees on arrangements justly merited congratulations and formal expression of appreciation from the officers and council as well as from the membership at large.

The reports of standing and special committees (published just prior to the annual meeting in the June issue of *The Journal*) and which were supplemented by oral reports by committee chairmen, were commended and endorsed by the House of Delegates. The special committee to which these annual reports were submitted, formally expressed approbation in the following terms, approved unanimously by the House of Delegates:

"After carefully considering the various reports contained in *The Journal* of June 1, 1920, your committee wishes to most enthusiastically commend said reports and urge that every member of the Association give them a careful reading in order to know how faithfully these various committees have served the Association. We recommend the adoption of the reports as published in *The Journal* of June 1, 1920."

A renewed pledge on behalf of the Association in the interest of the public was expressed by the House of Delegates in the adoption of resolutions commending and extending cooperation to the newly organized Ohio Public Health Association, which has for its primary purpose, the dissemination of knowledge concerning the prevention of disease; and to the special committee on crippled children of the Ohio Institute for Public Efficiency. A further expression of similar sentiment was incorporated in a resolution pledging cooperation with the Ohio State Teachers' Association in the promotion of better health conditions in the school and in the formation of a constructive program in health education.

For the first time in its history the practically unanimous sentiment of the profession found expression in opposition to a proposed scheme of compulsory state health insurance. The formal resolution adopted recently by the American Medical Association on this point was unan-

imously approved and adopted by the State Association.

Endorsement of a proposed federal department of health, commendation of the United States Public Health Service; investigation of the needs of the country regarding the narcotic drug situation; uniform methods of registration of vital statistics and other important proposals of national significance were approved through the institution of a supplementary report covering recent developments at the annual meeting of the American Medical Association, introduced by Dr. J. H. J. Upham, chairman of the Committee on Public Policy and Legislation, in addition to his formal report previously published.

The important news features developed in the sessions of the House of Delegates, including resolutions, reports, and the annual election are fully recounted in the minutes of the meetings published on page 527 in this issue, and not elsewhere reproduced in news form.

### Essence of Absurdity

When tempted to complain of the lack of perspicacity displayed by members of the legislature, just read the definition of chiropractic incorporated in a bill recently passed by the New Jersey Legislature by a vote of 16 to nothing in the Senate and 45 to 5 in the House, which established a state board of chiropractic.

The definition which might well be the ravings of a sub-normal mind, is as follows:

"The term Chiropractic when used in this act shall be construed to mean and be the name of the study and application of a universal philosophy of biology, theology, theosophy, health, disease, death, the science of the cause of disease and art of permitting the restoration of the triune relationships between all attributes necessary to normal composite forms, to harmonious quantities and qualities by placing in juxtaposition the abnormal concrete positions of definite mechanical portions with each other by hand, thus correcting all subluxations of the articulations of the spinal column, for the purpose of permitting the recreation of all normal cyclic currents through nerves that were formerly not permitted to be transmitted, through impingement but have now assumed their normal size and capacity for conduction as they emanate through intervertebral foramina—the expression of which were formerly excessive or partially lacking—named disease."

In commenting on the above definition, Dr. Harrison S. Maitland, director of the Pathological Laboratory of the Essex County Hospital, aptly stated that "It sounds like the musical criticism of a new comic opera. Can such an accumulation of junk be swallowed by intelligent men? A cult which has so many wonderful attainments certainly compares favorably with the doctrines of Mme. Blavatsky, and Ann O'Delta

Diss De Bar, whose profitable occupation was the separation of cash from the wallets of senile gentlemen. The passage of this act brings us back to the days of the old barber surgeons; and it is quite possible that in the near future your appendix may be removed by the barber.

"It is high time that the people of the state of New Jersey realize that the Legislature at Trenton is not a fit and safe body to instruct with the making of laws regarding the public health. The fair name of this state has been disgraced. The passage of this and similar impending legislation is a blot on the intelligence of the Legislature and the people of this state. Henceforth, from a medical, public health and scientific point of view, we are a laughing stock," he said.

While the definition of chiropractic in the proposed new bill, signatures for the initiation of which are now being secured in Ohio, is much briefer, it is equally inclusive, and similar to the definition in the New Jersey bill. In the proposed Ohio bill, chiropractic is defined as "the art and science of the analysis and adjustment by hand of the spine and tissues related thereto for the removal of the causes of disease."

Under such definition, Ohio chiropractors, according to newspaper advertisements, would be able to cure or eliminate the cause of everything from nosebleed to locomotor ataxia, and from asthma to tuberculosis; a recent advertisement of an Ohio chiropractor having included those diseases just mentioned as well as goitre, catarrh, pneumonia, dyspepsia, diabetes, appendicitis, peritonitis, lumbago, floating kidney, gall stones and fevers.

If an easy and painless exercise of the backbone will cure or eliminate all of the foregoing, you might ask your legislators and other political friends if chiropractic would not be a pleasant preventive prophylaxis for venereal infections.

### Forward, March!

From the standpoint of brevity, the keynote and inauguration speech of the newly installed president, Dr. Charles Lukens, of Toledo, delivered before the House of Delegates following his installation on the second day of the annual meeting, was a masterpiece.

The strongly united and harmonious Ohio State Medical Association, at the start of the new regime, is a tribute to the able and brilliant administration under the retiring president, Dr. J. F. Baldwin, and Dr. Lukens in his remarks indicated that the policy would be onward and upward, and his statement contained a high and well-deserved compliment to the Council of the Association on whose shoulders rests the large share of organization responsibility. In the re-election of Councilors whose terms expired at the annual meeting, the membership and the House



of Delegates re-affirmed its confidence in and esteem for the members of Council.

Dr. Lukens concluded his brief tribute in the following words:

"I realize fully that the strength of the doctor is in the Association, and the strength of the Association is in the doctor, but the doctor alone, unorganized, can do but little, but that with the splendid Association in Ohio,—with the splendid Council back of me, we can hope to do wonders; by myself, I am sure I could do little."

### Must Report Occupational Diseases

For seven years there has been a statute in this state requiring physicians to report occupational diseases. The recent legislature passed an amendment supplementing this law with a penalty section providing a fine of one hundred dollars or imprisonment for a period not to exceed ninety days, or both, for those who fail to make the required reports.

Effort has been made to inform physicians of the existence of the law and to urge upon them the importance of complying with its provisions. Unfortunately, the State Department of Health states that the original law was apparently not seriously regarded by physicians and that they did not respond with their usual excellent co-operation.

In view of the fact that the reporting of occupational diseases has not been stimulated to any degree since May 4, the date on which the amendment referred to above became effective, the State Department of Health has announced that it will shortly be compelled to take advantage of the legal measures incorporated in the amendment for use against those who disregard this law.

*The Journal* has been requested to again bring this matter to the attention of members of the Association and to emphasize the necessity of their co-operation. The medical profession has long recognized the importance of reporting communicable diseases as a first step in the public control of such diseases, and it will not fail to see the value of data, made available through careful reporting of occupational diseases, in improving conditions for industrial workers and preventing these diseases.

In an article published elsewhere in this issue, Dr. E. B. Starr, Director of the Division of Industrial Hygiene of the State Department of Health, discusses the effect of Ohio's rapid industrial development on the occupational disease situation, the diseases most prevalent, possibilities for their control, and other interesting angles.

It will be remembered that the penalty amendment to the law requiring the reporting of occupational diseases was enacted during the recent session of the legislature in lieu of an attempt to place these diseases within the scope of the workmen's compensation law. The data and statistics

collected will be a factor in determining whether or not these diseases should be included under workmen's compensation, an issue that will undoubtedly arise in the future, and to be of value in deciding this important problem, this data should be of maximum completeness. Every physician in the state should do his part by promptly reporting each case that comes to his attention on blanks which may be obtained free of cost from the State Department of Health or from local health commissioners.

### A Definite Policy

In adopting a firm and definite stand in opposition to compulsory state health insurance, this Association through its individual members, should make clear to the public the adoption of this policy not as a matter of expediency in the best interests of the medical profession as individuals, but from the position of what is best for the majority of citizens.

The medical profession has honestly expressed its opposition to the proposed scheme of compulsory state health insurance and at the same time adhered to its best traditions, not forgetting that the physician owes his first duty to his patient, his second in the service of the community, and third and lastly, his own individual welfare. As it has well been said, it is this tradition of the profession that through all the ages has kept the doctor at his post during epidemics and scourges of disease, and caused him to minister to the wounded and sick on every battlefield.

It is certainly to the interests of the public that these ideals be maintained, and that progress in medical science be encouraged. Such encouragement and all incentive would undoubtedly be withdrawn under state control of the practice of medicine to such an extent as contemplated by state insurance.

The chief social and economic fallacies in the proposed scheme were emphasized by Dr. Frederick R. Green of Chicago, secretary of the Council on Health and Public Instruction of the American Medical Association, and by Dr. Walter H. Snyder of Toledo, at a general session on the first evening of the annual meeting, attended by hundreds which crowded and overflowed the main auditorium of the Y. M. C. A. building.

"The proposal to institute a system of compulsory state health insurance is not in harmony with our system of government or with our economic or social organization. There has not yet been proved to exist in any state a sufficient amount of incapacity for work and inability for self-support due to sickness to justify the state in erecting as elaborate a machinery as would be necessary to establish and administer social insurance," declared Dr. Green.

"If such a scheme is to be tried it will be a dangerous experiment under the pressure of social welfare workers and professional economic advocates. The proponents of the plan have so

far utterly failed to prove certain essential points: First, that there is enough poverty and unemployment due to preventable diseases to justify such a plan, and second, that social insurance is the best remedy for the evil, provided it can be proved that the evil exists."

"The burden of proof is entirely upon the proponents and so far they have failed to present sufficient evidence. To attempt to apply statistics collected in Germany and England before the war, and under entirely different conditions from those of the present day in this country, is clearly illogical and the demand for social insurance is entirely artificial and inspired."

Dr. Snyder of Toledo, placed particular stress on the fact that in those counties where state health insurance had been provided that the so-called beneficiaries did not and could not get the proper medical attention which they deserved. He also pointed out that under such a system initiative was destroyed, the beneficiaries became in effect wards of the state, and the incentive for a high standard of professional training was also destroyed.

The speakers agreed that the proposed state health insurance was a form of governmental paternalism opposed to sound public policy in a democracy; that it would foster objectionable class distinctions besides enlarging the sphere of the state and at the same time creating a costly administration greatly outweighing the questionable benefits.

In addition, it is opposed to public policy in favoring a further encroachment on private rights and privileges, including the most personal concerns of the individuals and the supervision, control and direction of the person in matters of health and welfare, and it was declared that the promises it holds forth were practically impossible of fulfillment and that it would, if placed in operation, ultimately create an unwholesome industrial unrest.

Medical men and women are soon convinced that compulsory health insurance spells inferior sickness service and retrogression of medical science, but as they delve deeper into the subject they are amazed at the enormous amounts of money involved and the appeal of the plan to practical politicians and bureaucrats. Then awakens their sense of responsibility to the millions in the class created by the plan, benefited in no way, assessed, however, to the fullest as consumers and taxpayers. It is your duty to educate your unawakened fellow citizens to the menace of haste in the solving of this world old sickness problem by old world methods.

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#### A Limit

The fact that one out of several thousand physicians has issued spurious liquor prescriptions and become entangled in the meshes of the federal prohibition law has been the text on

which some newspapers have cast aspersions on the entire profession. When a federal judge recently made the statement that "a physician who illegally prescribes liquor stoops from the high professional plain to the level of a bootlegger," it should have been no reflection on the 99 per cent. plus of ethical physicians.

An interesting angle on this subject was emphasized editorially in a recent issue of the *Boston Post* which said in part:

"The protest of 235 physicians and surgeons of Boston and vicinity against the drastic provisions of the Volstead act as applied to their rights to prescribe alcoholic liquors for their patients cannot be sneered away as the manifesto of 'rummies' or men in league with the brewers and distillers. The signers are physicians of the highest standing, specialists of note and heads of hospitals and dispensaries. They may safely be presumed to be self-respecting citizens, as they surely are eminent practitioners."

A rather broad view of the situation is taken editorially by the *Canton News* under the heading "Unwise Limit" in the following terms:

"The action of the commissioner of internal revenue in limiting physicians to the issue of 100 liquor prescriptions every three months, will hardly meet the abuses which have arisen since the prohibition amendment became effective.

"The Volstead law and the amendment itself proscribes only the use of intoxicating liquors as a beverage. Under the circumstances it does not seem wise that the commissioner of internal revenue or any other bureau officials should be permitted to say what shall constitute the extent to which a physician may go in issuing prescriptions.

"It is true that some physicians have abused the trust that has been granted to them under the law—they have sought to enrich themselves by catering to the appetites of men for intoxicating liquors. These doctors should be punished, and they can be punished under the law.

"If there is any essential medicinal virtue in alcoholic liquors (and many noted physicians doubt it), it is not the province of the internal revenue department to limit the number of prescriptions which any reputable physician may issue.

"The law provides that no prescription shall be issued until after the physician has made examination of the applicant and is satisfied that whiskey is the thing necessary for his particular case. Only dishonest doctors (and there seems to be a few) will stultify themselves by issuing prescriptions for beverage purposes.

"Nothing will be gained by arbitrary action of the internal revenue department in restricting the issuance of physicians' prescriptions for liquor. Careful checking of liquor used for 'medicinal purposes' should be effective in discovering the doctors who are violating the law."



## The Dietetics of Nephritis\*

S. R. Salzman, M. D., F. A. C. S., Toledo

**Editor's Note.**—The newer chemistry of the blood and urine enables the clinician to utilize to a nicety the dietetic management of nephritis. Non-protein nitrogen can be diminished in the blood by a low protein diet. The minimum amount of protein which the body metabolizes is not during starvation but on high carbohydrate diet. Hence it is that a low protein high carbohydrate diet is so effective in handling chronic interstitial nephritis. In some instances even this diet will not reduce the retention products. The kidney threshold for these substances is materially raised and the prognosis in such cases is rather grave. In the treatment of parenchymatous nephritis the diet instead of being directed against the retention of nitrogenous waste products, must reduce albuminuria, metabolic disturbances, anemia and oedema. The diet of Widal and Javal is preferable to the exclusive milk diet. Epstein has replaced the Karrell Cure with a diet calculated to increase the protein content of the blood and thus help it to regain its osmotic powers and to remove and cause reabsorption by the tissues of the excessive lipoids. Some experimental data has been brought against this idea but Newburgh suggests that the kidney injury is related to those digestive products of proteins which vary with the type of protein eaten.

**T**HE dietetic management of nephritis has been the subject of considerable attention the last few years. From the standpoint of diet we have practically to deal with two separate types of disease, the chronic *interstitial* nephritis, and the chronic *parenchymatous nephritis*, or now called nephrosis.

### QUANTITATIVE BLOOD AND URINE TESTS

The modern dietetic management of chronic nephritis is based upon the fact that quantitative blood tests show a retention of products of protein destruction. The normal quantities found in the blood are: non-protein nitrogen, 30 mgs. urea nitrogen, 15 mgs.; uric acid, 1-2 mgs. and creatinin, 1-2 mgs. per 100 cc. of blood. Appreciably higher values indicate retention due to excessive destruction or failure to eliminate which is usually at fault.

Except for the retention of uric acid in the blood, the quantity of urine passed at night, after a test meal, as shown by Mosenthal,<sup>2</sup> is probably the most delicate clinical test at our command to indicate the power of the kidney to concentrate substances in the urine. In making this test no liquid should be taken after the evening meal, the urine should be collected beginning three hours after the meal, and ending at breakfast. The amount collected varies normally from 400 to 750 cc. Anything over this is excessive and other conditions being ruled out, such as cystitis, hypertrophied prostate, pyelitis, anemia or diabetes, it indicates inability of the kidney to concentrate substances in the urine, and therefore pathologic changes in the kidney. Putting this another way, the patient is taking a quantity of protein which his kidney is unable to eliminate, except by an abnormal degree of effort.

Reduction of protein in the diet to a lower level is therefore indicated in nocturnal polyuria, even though at this stage blood urea does not show higher values than normally. Polyuria is an aid to a nephritic in getting rid of waste

products. In a normal kidney large quantities of fluid may be excreted over long periods, as in diabetes insipidus, without harm to the kidney. In nephritis, however, fatigue of the kidney may result from over stimulation and diminution of elimination followed by uremia and death may result.

Formerly urea was considered to be the toxic agent, hence the name, uremia. Today doubt exists whether urea is toxic at all. When urea reaches the level of 68.2 mgs. per 100 cc. blood, symptoms may appear, such as headache, dizziness, apathy, drowsiness, weakness and fatigue,<sup>3</sup> and disappear when the urea level falls below this figure. Patients may be seen, however, who have a much higher amount of urea in the blood, yet no symptoms are present at all. It is certain that retention of these products indicate kidney insufficiency, and whether they are themselves responsible for these symptoms or not, it is certain that toxic substances act when urea, uric acid, creatinin and non-protein nitrogen are increased in the blood. Urea and creatinin are of particular value in judging of the severity of the nephritic condition. Over 65 mgs. of urea or 5 mgs. of creatinin indicate a very grave situation.

### THERAPEUTIC INDICATIONS

The therapeutic indications are, therefore, to keep the blood free from the accumulation of such substances and to remove the excessive stimulation and irritation to the kidney, and the possibility of developing renal fatigue. Frothingham and Smillie<sup>4</sup> were among the first to show how non-protein nitrogen could be diminished in the blood by the low protein diet.

*The minimum amount of protein which the body metabolizes is not during starvation, but on the high carbohydrate diet. During starvation the body will metabolize about 65 grams of protein daily, while on a high carbohydrate diet about 35 to 40 grams is sufficient to maintain normal nutrition. This, then, should be the proper quantity of protein when retention of nitrogenous material is dealt with.*

\*Read before the Toledo Academy of Medicine, March 18, 1920.

## DIETETIC REGIMEN

The following diet, after Mosenthal,<sup>5</sup> has been found to be of value in these severe cases or whenever it is intended to reduce the retained waste products as quickly as possible. It has the advantage of not requiring to be weighed, inasmuch as, even when the patient eats whatever he may desire of these articles of food, he will not consume more protein than is required to cover the minimum he would excrete on a high carbohydrate diet.

## LOW PROTEIN HIGH CARBOHYDRATE DIET

(Salt, sugar and butter may be used as desired, and need not be weighed or measured.)

## BREAKFAST:

Sherry, 30 cc.

Baked apple, stewed prunes, orange.

"Hominy constarch cereal (two-thirds hominy, one-third cornstarch.)

Cream, 15 cc.

## DINNER:

Sherry, 30 cc.

Potato, baked or mashed.

String beans, cabbage, carrots, lettuce, onions, tomatoes, cucumber pickles.

Fruit cornstarch pudding, fruit tapioca pudding.

## SUPPER:

Same as dinner.

It should be mentioned of course, that all meats containing large amounts of nucleins, such as sweet-breads, liver, kidney, should be entirely prohibited, even when a strict low protein diet is not used. Also all foods containing extractives, such as soups, broths and beef-tea must be absolutely prohibited. The same must be said for condiments. The latter are not particularly harmful, but they are of no particular use to the body, therefore they simply entail unnecessary labor for the kidney to eliminate them.

*In some instances the diet, no matter how low in protein or how high in carbohydrate, will not reduce the retention products. The kidney threshold for these substances is materially raised, and the prognosis in such cases is rather grave.*

## FLUID INTAKE

Dr. Joseph Miller of Chicago, in some unpublished experiments made some very interesting observations. In two patients with chronic interstitial nephritis, with about 80 mgs. of urea in the blood and moderately high blood pressure, he attempted to wash out the urea by giving enormous quantities of liquid through a Rhelfuss duodenal tube. These patients were given six gallons of fluid within 24 hours. The net results of these experiments were: that the patients retained the fluid; gained twenty pounds in weight; the blood pressure went up from 185 systolic to 312; very severe headache appeared, but no oedema was present; the blood urea

showed absolutely no change. This was repeated in each patient with the same result each time.

In another patient with typical gout and only slight kidney involvement, no retention of water occurred. The patient passed out urine about as rapidly as the fluid was taken through the tube. Here also the blood urea remained at the same level.

These experiments seemed to indicate the hopelessness of treatment in advanced cases of nephritis with any method at our command at the present time.

## HANDLING PARENCHYMATOUS NEPHRITIS

In the treatment of parenchymatous nephritis we are dealing with a different set of manifestations. Here instead of retention of nitrogenous waste products, we have to do with albuminuria, metabolic disturbances, anemia and oedema. The management of these cases is very largely dietetic. An attempt should be made to reduce the albumin in the urine, but not by reducing protein in the diet. Osler was the first to call attention to the harm done by unnecessarily removing protein from the diet in albuminuria. It must be emphasized that our newer methods of blood examination have shown that many of these cases having albuminuria have no retention of the end products of protein metabolism, and a marked reduction of protein in the diet is not indicated.

## DIETETIC POINTERS

Exclusive milk diet as originally advocated by Widai, has been discarded, because of its many disadvantages. Milk has too much protein, and too little carbohydrate, an excess of phosphorous, and is deficient in iron. Its effect upon the gastrointestinal tract when long continued, is not without serious consequences.

Widai and Javal,<sup>6</sup> have recently proposed a more extensive diet in these cases. This diet yields 1500 calories and consists of bread made without salt, 200 grams; raw meat, 200 grams; potatoes, 280 grams; sugar, 50 grams, and light wines.

## CAUSATIVE FACTORS OF OEDEMA

These patients seem to get along very well on this diet. The anemia is usually taken care of on this full diet, and little else need be said about it.

Oedema is always an important factor in parenchymatous nephritis, or, as it is now called, nephrosis. Many methods of eliminating water from the body have been used. Diet alone, however, is of greater value than all the other methods. Of the various theories advanced to explain oedema, the one which was mostly accepted was that of salt retention.

Widai was the first to call attention to salt retention. He showed that there is a marked retention of salt in the body which favors retention of fluids by the tissues, and oedema results.



To overcome this he advocates a salt-free diet and limitation of liquids.

The so-called Karrell Cure for dropsy first appeared in 1866, and is still popular in some quarters. It consists in giving patients 7 oz. of milk, or skimmed milk (when fat is not well borne) at 8-12-4 and 8 o'clock. No other liquid or food of any kind should be given. Goodman,<sup>7</sup> summarizing his experiences with 100 cases, emphasizes the fact that these quantities and the time intervals must be rigidly adhered to. Any variation or allowing any other liquid to be taken will nullify the effect of the treatment. Wright<sup>8</sup> also speaks highly of this treatment. This treatment is too rigid for general use, as it is impossible for the patient to live up to it. Furthermore, the danger of severe asthenia, if the treatment is too prolonged, must be kept in mind. Widal, who first proposed the exclusive milk diet, has now modified it, as previously outlined.

This diet approaches that of Epstein,<sup>9</sup> although the purpose is not quite the same. Epstein has put forward the theory that oedema and anasarca in parenchymatous nephritis is not due to salt retention, but to changes in the blood protein. He calls attention to the fact that various states of hydraemia do not cause oedema. The experience of Dr. J. Miller mentioned above, certainly bears out this fact. He also quotes numerous authors who have shown that in states of nephritis there are definite changes in the capillaries which make it more difficult for fluid to pass from the blood to the tissues. These facts and others, cause him to believe that salt retention accompanied by fluid retention cannot of itself cause oedema.

He has found changes in the blood protein of a definite character. Normally the percentages of protein are: albumin, 63 and globulin 37 per cent. In chronic parenchymatous nephritis there is a remarkable change in these percentages: albumin, 11 and globulin 89 per cent. This alteration he thinks is due chiefly to the long continued loss of albumin through the urine, and is aggravated by dietary limitations. Normally the blood contains about 210 grams of protein. The daily loss due to albuminuria, varying from 4 to 20 grams per day, as is often the case, will soon impoverish the blood if not replaced by dietetic or other means. *This loss of protein in the blood, when sufficiently great, results in such a marked decrease in the osmotic tension of the blood that absorption and imbibition and retention of fluid by the tissues results.*

Another important factor in this type of nephritis is the increase in the lipid content of the blood. It has been shown<sup>10, 11</sup> that the presence of lipoids in the circulation when in excess of normal, affects the kidney cells and interferes with their function. Also that it favors imbibition and swelling of the tissue cells. The problem then, in the treatment of parenchymatous nephri-

tis is to relieve the oedema and prevent its recurrence.

*The indications are (1) to increase protein content of the blood and thus help it to regain its osmotic power; (2) to remove and cause reabsorption by the tissues of the excessive lipoids. The first can be accomplished by massive transfusion of whole blood after removing equal amounts of blood from the patient. This for various reasons is not always feasible, so chief reliance must be placed upon adequate dietary measures. This consists in giving large quantities of properly selected proteins, limiting the carbohydrate and eliminating the fats, to relieve the lipoidemia.*

#### DIET EMPLOYED—(After Epstein)

Total food value, 1200-2500 calories.

Protein, 120-240 grams.

Fats, 20-40 grams.

Carbohydrate, 150-300 grams.

#### ARTICLES USED

Lean veal, lean ham, white of egg, oysters, gelatin, lima beans, lentils, split peas, green peas, mushrooms, rice, oatmeal, bananas, skimmed milk, coffee, tea and cocoa. Fluid should be restricted to about 1200 cc. daily, and salt just enough to make food palatable.

Epstein has used this method in a small number of cases, and his results are very encouraging. The oedema decreases slowly, but progressively; albumin diminishes, and the patient's health improves steadily.

Sir T. Clifford Allbutt<sup>12</sup> and John R. Williams<sup>13</sup> are enthusiastic about the feeding of high protein diet in cases of albuminuria and oedema. Mosenenthal reports several cases of albuminuria from seven to fourteen years standing on full protein diet, whose kidney function test and blood examination show normal values. Chase and Rose<sup>14</sup> have also reported some excellent results with this diet.

#### EXPERIMENTAL RESULTS OF HIGH PROTEIN DIET

The value of high protein feeding in nephritis has, however, been questioned by Newburgh<sup>15</sup> of the University of Michigan. Newburgh found by experimental work on rabbits that when these animals are constantly fed on high protein diet they develop chronic nephritis. He thinks that when the kidney has to continually make an excessive effort to eliminate nitrogenous waste this continued effort ends in a scar. Rabbits fed an exclusive diet of coagulated egg white show albuminuria within three days and casts after a week. Rabbits can be kept for many months on an exclusive diet of soy beans, which contains 40 per cent. protein. They show albuminuria and urinary casts after a few weeks, and the blood urea averages 100 mgs. per 100 cc. blood. After four or five months of such exclusive feeding the kidneys of these animals show clear evidence of a progressive subacute or chronic nephritis. In

addition to the epithelial injury and congestion, there is a diffuse extensive increase in connective tissue.

*Newburgh suggests that the kidney injury is related to those digestive products of proteins which vary with the type of protein eaten.*

The *Journal* of the American Medical Association<sup>10</sup> comments on these experimental findings, remarking that they will be quoted by the advocates of the older methods of low protein diets, but it states that urea *per se* is not changed with the harm done, and that the diets used by Newburgh were potentially acid in character and certain to produce an acid urine in a species of animal accustomed to an alkaline food. Until such experiments as Newburgh's are repeated and verified under different conditions, the incrimination

of high protein diets must be accepted with reserve.

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16. Jour. Amer. Med. Assn., 1920, IXXIV, 107.

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## The Problem of Acidosis in Relation to Disease\*

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Editor's Note.—Occasionally it is of interest to have a review of the accumulated data regarding a comparatively new subject in medicine with a detailed expression of divergent views and opinions upon it. At the present time a great deal of attention is being paid to acidosis as a problem in disease conditions. A consideration of mere macroscopic and microscopic pathology is giving place to the refinement of chemical and functional pathology. The possibilities of diagnosis and prognosis resulting from these newer conceptions of physico-chemical reactions are extending the accuracy and therapy of the medical art. In fact the practice of medicine is now entering a realm of development that promises to rival in its spectacular results the greatest achievements of aseptic surgery. The underlying mechanism of health and disease is gradually being laid bare. Its exposition makes one of the most fascinating pages in the historical evolution of medicine. It is a page one should become familiar with at once.

I SHALL make no attempt to correlate the scientific information now available, and shall eliminate as far as possible all technicalities and confine my remarks to things which can be applied in daily practices, believing that this condition is much more prevalent than was formerly known.

I am quite fully aware of the many different theories as to the etiology, methods of production of symptoms and treatments of this condition. In a general review of the literature one is impressed with the fact that final conclusions have not yet been established and in a paper of this kind there may seem to be many contradictory or at least non-harmonizing statements, which are made, fully appreciating their presence. In fact, any review of the literature makes such contradictions inevitable.

My essay will briefly review the most tenable theories of acidosis, but I shall make no attempt to bring together the many divergent views regarding the condition.

There has been a marked tendency of late years to give the term a very much broader application than was formerly the case, due no doubt, to the change of medical opinions from the idea of structural pathology to functional or chem-

ical pathology, and in part due to more delicate and accurate methods of study.

### THE HISTORICAL EVOLUTION OF ACIDOSIS

The history of acidosis, from a time-period, is a relatively short one. The earliest mention that I am able to find of it in literature is that of Boussingoult, about 1850, who made the very valuable discovery that "large amounts of ammonia frequently appear in the urine of diabetic patients." As pointed out by Polin, "it was not until 1880, that Hallervorden using an inferior technique repeated and confirmed Boussingoult's work. The search for acid radicals to account for the presence of these ammonium salts in acid urine culminated in 1883, in Stadelmann's discovery of oxybutyric acid." Confusing theories were arising at this period, but already in 1877, Walter had clarified the situation considerably by demonstrating in animals that the injection of mineral acids proved fatal, although the blood serum remained faintly alkaline in litmus. The first definite clinical observations were made during this period by Kussmaul, who noted the air hunger of advanced diabetic patients. In recent years there has been renewed activity in the study of acidosis, particularly of those types of non-diabetic origin." These investigations have served to emphasize that the fixed alkalines are neces-

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sary for the physiological requirements of the body and that they are essential to life.”—(Sclard Introductions.)

The discovery of the acetone bodies led to the name acidosis, which, according to some modern theories, is a misnomer, for if the theories of one school be correct, then the ketone bodies and other sub-oxidation acids are responsible for the symptom-complex known as acidosis. Our own opinion is that both theories have some basis in fact, and that ultimate conclusions will be that both schools will find their proper place.

Possibly some of the divergencies of opinions have been created and maintained by different methods of study. The difference between titration and physico-chemical reaction are sufficient to change one's opinion concerning the relative degrees of acidity and alkalinity. The blood serum being amphoteretic makes the less sensitive methods hardly dependable. On the other hand the extreme sensitiveness of the physico-chemical reaction causes almost inappreciable changes to assume or appear to assume relatively increased importance.

#### IMPORTANCE OF THE DISEASE

From personal experience and from the literature, one is inclined to believe that acidosis *per se* is a rather rare condition. From the same sources of information we are obliged to believe that it is present as a complication in a vast majority of the acute infectious diseases of many metabolic disturbances and in practically all of the conditions manifested in conditions of lowered eliminations.

In pediatrics it will be found particularly prevalent, especially complicating diseases of the gastro-intestinal canal, and more particularly to the infectious diarrheas of the ilio-colitis type. Less frequently in respiratory illness. The so-called food intoxications, and especially those in which there is disturbance of carbohydrate metabolism, are especially apt to develop acidosis. Diarrheal conditions, especially those from diseases of the colon are responsible for a large incidence of this complication.

The internist is interested in this condition particularly in relation to impaired pulmonary ventilation, right side heart lesions, metabolic disturbances, the nephritides and diabetic conditions, as well as acute infectious diseases.

The obstetrician will find interest in acidosis in its relation to the intoxications of pregnancy. The anesthetist and surgeon will be equally interested in acidosis following anesthesia and operations. Chloroform would seem to be more liable to produce acidosis than is ether or nitrous oxide, on account of the HCl liberation in tissues. “Starvation of patients for a period of twenty-four hours or longer before operation should be condemned, because by so doing the danger of inducing an acidosis is greatly increased. Especially should it be emphasized that carbohydrates should not

be withheld from patients for long periods of time; for it is from the carbohydrates, of course, that glycogen is made. If for any reason they cannot be taken by the mouth, a glucose solution can be given per rectum.” “The measures which we employ to combat such acidosis are briefly the administration of carbohydrates and alkalies to a sufficient extent to insure a change in reaction of the urine. The haphazard giving of alkali-carbohydrate without accurate knowledge of whether we are giving enough to counteract the acidosis is unscientific and unwise. Alkali should be given to the point where the urine is neutral to litmus or reacts red to phenolphthalein.”—(Everts & Graham, on “Acidosis in Surgery,” *Journal Iowa State Medical Association*, VIII, 4.)

There is the more reason for bearing these conclusions in mind, because acidosis is one of the commonest of pathological states. Indeed, I think that is probably more common than fever. Therefore, one may conclude that in serious illness the test for acidosis should always be made, especially because it is often a very simple matter to repair the defect. And there is some reason to suppose that such action may occasionally be of the greatest importance.—(L.J.H. Ox. Med. Volume I, page 501.)

Holt states that 30 per cent of 200 consecutive cases in the New York Babies' Hospital showed acetonuria, and of all babies with pneumonia, 70 per cent have acetone and diacetic acid in the urine.—(L. U. Gardner, *Amer. Jour. Med. Sciences*, Vol. 155, No. 3, p. 381.)

Recent literature would lead me to believe that this condition is much more prevalent in the Southern climate than in the Northern climate. In a recent copy “Archives of Internal Medicine” it was stated that some of the European countries believed this condition to be the cause of the so-called neuro-circulatory asthenia. However this seems rather far-fetched.

As for the so-called epidemics of acidosis we believe that they have no basis in fact. (Note—In a recent consultation with a leading pediatrician from a neighboring city, in a severe case of acidosis, he stated that he had never observed a case in other than light complexioned children. This however does not correspond with my experience.)

#### EQUILIBRIUM BETWEEN BASES AND ACIDS

A—Bases. Sodium carbonate, sodium bicarbonate and the alkaline phosphates, with other bases of less import, make up the important alkalies in maintaining the alkalinity of the blood and fluids of the body. Under normal conditions these are found in sufficient amounts in the ordinary dietetic regimen. Any excess of these food constituents is either deposited in the tissues and is known as the alkaline reserve or buffer substances or is promptly eliminated through the natural channels. Hyper-alkalinity, I believe, to be rather doubtful. Another source of the alkalies

of much less significance is from the digestion of the proteins. On a mixed diet the acid radicals produced by the combustion of sulphur, phosphorus and carbon alone exceed the bases present. The source of acid products which enter into the disturbance of the acid-base equilibrium has been variously explained. The possibilities are: (1) That they are acids or acid salts which are produced and absorbed in excess, the derivations of which may be the excessive products of abnormal bacterial life or the acid products of deranged metabolism. (2) That they are the abnormal acid products of a diverted tissue metabolism; (3) That they are the products of a normal metabolism, which accumulate on account of defective elimination. (4) That the acid products become excessive because of abnormal loss of alkalis.—(Snyder & Welch, *Lit. on Acidosis, South. Med. Jour.*, Vol. XI, p. 111.)

**B—Acids.** The sources of the acids are the same in health and disease. Whether the accumulation is due to an increased production or to lowered elimination, or whether new acids are formed, depends upon conditions present. Only in a few conditions are there abnormal acids found. These are diabetic conditions, and local acidoses, either from local bacterial infections or from stasis. Some authorities go so far as to say that every trauma is complicated with the local acidosis.

**C—Equilibrium.** "It has been known since early in the study of physiology that there is a constant equilibrium of nitrogen intake and output. Day by day the excretion equals the intake. Later investigations reveal an equilibrium of such intake as water, salt, sodium bicarbonate, glucose and the like, also an equilibrium of temperature, of volume, osmotic pressure and of alkalinity."

Henderson said, "Nobody can hope to understand disease who has not studied the fundamental regularity processes of the body, on the one hand as physico-chemical processes, and on the other hand as illustrations of the phenomenon of organization."—(L. J. H., *Ox. Med.*, page 472.)

Roux says: "That the capacity of autonomous regulation is quite the most important of all the peculiarities of life."—Roux, *Ox. Med.*, page 476.)

"One of the most important constants in the body is the chemical reaction of its fluids. This reaction is very slightly alkaline, so slightly alkaline indeed that it may be considered almost neutral. This slight alkalinity is maintained despite the constant production of acid substances in the body. Carbonic acid is formed from the combustion of proteins, fats and carbohydrates; sulphuric acid is formed from the combustion of proteins and phosphoric acid is formed from the nucleoproteins and lecithins."—(Hewlett, *Ox. Med.* page 133.)

"The application of physical chemistry to physiology has encountered serious and highly characteristic difficulties, for the well defined physico-chemical processes are those which take place

in homogeneous systems containing small numbers of simple components. But we seek in vain for such simple systems isolated within the body. Instead we find in every case heterogeneous systems of indeterminate compositions, which doubtless involve nearly all the complications that are possible in the presence of solids, liquids and gases. In particular the difficulties which depend upon the presence of colloids and of more or less semi-permeable membranes are always involved. Indeed, many of the principles upon which the true description of such systems depends still remain unknown, or at least very uncertain."—(L. J. H., *Ox. Med.*, pp. 88-89.)

"Thus it may be seen that there is no beginning and no end to the regulatory processes, and, indeed, that strictly speaking there do not exist regulatory processes at all, but rather a single regulatory process, infinite in its ramifications and identical with the total activity of the organism. In such a system it is almost a hopeless task to distinguish cause and effect, for anything may be either cause or effect."—(L. J. H., *Ox. Med.*, p. 477.)

Nevertheless, with all of these difficulties we are able to understand and interpret the regulatory processes by which the alkalinity of the blood is safe-guarded.

The blood and tissues of the body must maintain an alkaline reaction. The normal degree of alkalinity is stated as varying from 325 to 360 mg. of sodium hydrate for each 100 cc. of blood determined by titration. Very decided lowering not even reaching the neutral point, is certainly fatal.

The highly important process of disposing of these acid radicals arising from metabolism and maintaining the constant alkaline reaction is accomplished by a mechanism which is extremely efficient and comparatively simple and is operative in health and disease. Three important processes are operative, *viz.*, oxidation, excretion and elimination.

The disposition of the food carbons is quite simple, since carbon is easily *oxidized*, the resulting carbon dioxide being *eliminated* as carbon dioxide by the lungs and by the kidneys after conversion into urea. The sulphur and phosphorus products are *neutralized* by the fixed body bases. One of the anomalies of physiology is the fact that the kidneys are able to excrete a sharply acid urine from the alkaline blood plasma and that alkalis may be eliminated by the same source. It can be readily seen that the kidneys have much to do with the finer details of maintaining the acid-base equilibrium. Another important factor in maintaining alkalinity is accomplished in the course of the metabolism of nitrogen through the interception and neutralization of ammonia by the acid radicals. It may be stated axiomatically that the appearance of ammonia in the urine is evidence of either an increase in the acid radicals or a depletion of the



bases. Another method of defense against the acid incursions is the amphoteric nature of the colloids in the blood which enables it to take up relatively large amounts of acids or bases without changing its reaction.

A still further line of defense, "is the buffer substance" of the corpuscles. HCl is taken up by the corpuscles from the plasma and releases the K-Na which go to the plasma—lowering acidity of plasma and increasing its alkalinity.

"Indeed the transference of acid through the corpuscular envelop indicates that the same sort of thing must go on with the other cells of the body, so that the plasma, itself rather poor in buffer substances, has all those of the body at its disposal."—(McLoed, p. 40.)

These protective mechanisms maintain a constant blood and fluid reaction much more stable than the stability of the pulse, temperature or respiratory constant. The importance of this constant can be fully appreciated only when we remember that the change in reaction of the blood from that of tap water, which is more alkaline than the blood, to that of distilled water, which is more acid than the blood, is absolutely incompatible to life. (Sajous's Analytic Cyclopedia of Practical Med., 1914, Vol. 13, p. 369.)

#### ETIOLOGY

As is already apparent from the preceding sections, two distinct etiological factors enter into the production of acidosis, namely, defective oxidation of organic acids and defective elimination of mineral acids.

It now remains to discuss those diseases or conditions which produce either of these causes. The mere mention of all the diseases which acidosis complicates, as reviewed by the recent literature on the subject, would be entirely too bizarre. The two extremes of life are the two periods in which the conditions are most prevalent. In infancy and childhood, before the period of stable metabolism, and the period of life in which the acute infections are most common and before the body constants become established is the period of life in which acidosis is most common. Fortunately diarrheal diseases, particularly the infectious type, are not so prevalent as formerly, due to better hygienic living.

On the contrary, there is a marked increase in the percentage of deaths due to failure of the eliminative organs and as failure of elimination is one of the frequent sources of acidosis the latter years of life are very frequently associated with acidosis. This is especially true with the nephropathies of various types. Conditions of impaired ventilation, whether from pulmonary diseases or from right sided heart lesions, destructive diseases of the liver parenchyma, arteriosclerosis, and lowered metabolism with advanced years.

It is especially prone to develop in artificially fed children and in those breast raised where

there is a disproportion between the carbohydrates and the fats in the mother's nurse, as well as in cases of intestinal putrefaction of proteids as evidenced by increased amounts of indican in the urine.

As typical of the methods of production of acidosis we give the following illustration: "There are probably many factors present in tuberculosis which have a tendency to increase acidosis, such as deficient intake of oxygen; deficient excretion of carbon dioxide which occurs particularly late in the disease as result of diminished pulmonary area; slowness of the circulation owing to the peculiar vasomotor changes; also the general changes in the tissues themselves, and disturbance on the part of the heart. Toxins also probably act to the same end. This may be the ultimate explanation of the dyspnea which appears when the body is called upon for extra exertion."—(Pottinger Clinical Tuberculosis, Vol. 1, p. 456.)

#### SYMPTOMATOLOGY

The symptoms of acidosis are frequently entirely eclipsed by the condition which it complicates, and the symptoms of acidosis depend very much upon the disease which it complicates, whether acute or chronic, whether depending upon disturbed carbohydrate metabolism or otherwise, and whether primary or secondary, so that they are frequently overlooked.

In uncomplicated acidosis the sequence of symptoms would be somewhat as follows: In the prodromal period it is more or less *malaise*, which as the disease progresses, gradually becomes more marked to a condition of *drowsiness* and this may give place to more or less profound *coma*. However, some cases manifest restlessness through the entire course of the disease.

Vomiting usually begins early. During the period of drowsiness the patient frequently rouses from the drowsiness and vomits large quantities of fluid and lapses back into the drowsiness. The vomited material is frequently entirely out of proportion to the amount of fluid intake.

Vomiting may entirely overshadow all the other symptoms. A type of acidosis is known as cyclical vomiting. Thirst becomes insatiable, no sooner has the fluid taken reached the stomach than it is expelled. The vomiting is usually highly acid. If the vomiting is long continued it later becomes bile tinged.

In severe types of the disease there is an abnormal redness of the mucous membranes. This is readily distinguished from the bluish purple color of cyanosis. When this symptom is present the skin of the face has taken on a dusky hue, which makes the color of the lips and mucous membrane stand out in vivid contrast.

If the acidosis be produced by one of the conditions in which there is a disturbance of carbohydrate metabolism, at this stage of the disease there is a fruity or sweetish odor to the breath.

The temperature is usually elevated in propor-

tion to the severity of the sickness. In fatal cases, in the terminal stages, registering from  $103^{\circ}$  to  $105^{\circ}$  or more.

Breathing assumes the type as first described by Kussmaul, the type which bears his name. It is rapid, deep, the lower chest walls expand and contract enormously. Physical examination of the chest at this time fails to detect any abnormality.

The mouth is usually dry and this is partly the cause of the thirst. The output of urine is usually quite limited and in the latter stages it has the odor of ammonia.

As the disease advances there is enlargement of the liver, with tenderness on deep palpation.

#### DIAGNOSIS

(A) The *clinical signs and symptoms* have been sufficiently dealt with under the section of symptomatology and need not be recapitulated here.

(B) *Laboratory Methods.* Many laboratory procedures are available. Of these we will outline those which seem to have the most practical merit.

- (1) Examination of the blood.
  - (a) For lowered alkalinity.
  - (b) For increased acidity.
- (2) Examination of the expired air.
- (3) Examination of the urine.
  - (a) For increased acidity.
  - (b) For abnormal acids.
  - (c) For change in fixed bases.
  - (d) For increase in ammonia output.

#### LOWERED ALKALINITY

Titration methods lack delicacy. *First*, on account of the indicators not being sensitive enough to show fine degrees of acidity. Physico-chemical methods are too delicate and show changes almost to infinity, and require laboratory and technical experience.

#### INCREASED ACIDITY

This again involves the same procedure as the study of the blood for lowered alkalinity and can be dismissed for the same reason.

#### EXAMINATION OF THE EXPIRED AIR

The carbon dioxide alveolar tension of the expired air runs practically parallel with the carbon dioxide of the blood.

"If we compare the  $\text{CO}_2$  tension of the arterial blood, as measured by the Krogh Method, with that of alveolar air, we shall find that there is a remarkable correspondence, indicating therefore, that when the arterial blood leaves the alveoli, its partial pressure or tension of  $\text{CO}_2$  is exactly equal to that in the alveolar air. This is shown in the experiments performed by Krogh."—(McLeod, p. 342.)

"A determination of the carbon dioxide coefficient of the expired air is probably the most reliable method of diagnosis in use, and an ap-

paratus has recently been perfected, by Howland and Marriott, whereby this estimation can be had on children, but on infants it is difficult to get results."—(Connor, Interstate Med. Jour., Vol. 5, No. 8, p. 613.) This method is also indorsed by Dr. Floyd Clark, (Neb. Med. Jour., Vol. 3, No. 2, p. 38). Also by Snyder & Welch (South Med. Jour., Vol. 2, No. 3, p. 223.) They say: "It is practicable at the bedside and an aid to diagnosis, and the degree of severity and treatment." "In the consideration of acidosis the carbon dioxide content of the blood and alveolar air are so closely interdependent that for general purposes they may be considered together. They depend of course upon a common factor, i. e. the content of the blood in carbonates, and ordinarily the agreement between them is very close."—(Sellard, p. 20.)

The carbon dioxide alveolar tension is a measure of the  $\text{CO}_2$  carrying power of the blood, which is equal to its alkalinity, and as the alkalinity and acidity increase and decrease conversely, then the carbon dioxide alveolar tension of the expired air becomes a measure of both the alkalinity and acidity of the blood.

This statement is verified by the following statement: "For this reason the alveolar carbon dioxide is proportional to the free carbonic acid and therefore, in compensated acidosis, to the bicarbonate of the blood. Accordingly Haldane's method for the determination of alveolar carbon dioxide may be used as a measurement of acidosis."—(L. J. H., Ox. Med., p. 499.)

"Unfortunately the carbon dioxide content is lowered by conditions other than acidosis, or at least in which the existence of acidosis has yet to be established."—(Sellard, p. 22.)

"There are at least two general groups of factors other than acidosis which lower the carbon dioxide tension in the alveolar air, namely: (1) increased pulmonary ventilation, as illustrated by high altitudes, and (2) any change in the lungs or in the circulation which would interfere with the exchange of gases between the alveolar air and the blood. Such changes probably account for the low values found in some of the cardiac cases. A moderate fall in the carbon dioxide content of the blood or alveolar air is not adequate proof of the existence of acidosis, in unknown conditions, without the support of confirmatory evidence."—(Sellard, p. 21.)

#### EXAMINATION OF THE URINE

(a) As has been seen, the kidneys in finer detail regulate the acid-base equilibrium and excrete both acids and bases.

There is nothing in the degree of acidity that is diagnostic; however, in a general way, the degree of acidity is usually increased. Under other circumstances the acidity may be lowered.

(b) "Theoretically it is not even necessary that excessive amounts of acid should appear in the urine in the development of an acidosis, but on the



contrary even the normal amount of acid may be diminished in case of impairment in the ability of the kidneys to excrete acid. Even when the kidney is normal the determination of the daily acidity is not helpful either as a means of detection or as a method of measurement of the degree of acidosis."—(Sellard, p. 22.)

The finding of abnormal acids gives positive evidence of acidosis, if found in sufficient amounts. Unfortunately these are found only in carbohydrate acidosis and diabetes.

(c) The determination of the bases, sodium, potassium, calcium and magnesium is too complicated a procedure for routine work; moreover, the excretion of calcium and magnesium may decrease rapidly even in advanced grades of acidosis on account of a depletion in the supply of available amounts of these salts in the body. Consequently the determinations must be made, not for a single day, but throughout the entire period of acidosis, if their significance is to be properly interpreted.

(d) Increase in Ammonia Output. This might seem to be the method of choice. This is not true. It has been proven that fatal acidosis may occur with a normal or subnormal output of ammonia and under conditions in which there is no disturbance of carbohydrate metabolism.

#### RELATIVE VALUE OF THE TEST

Sellard gives the following:

(1) *Appearance of acetone bodies in the urine* (for carbohydrate acidosis only). The finding of ketone bodies is pathognomonic, but unfortunately it is limited to cases of carbohydrate disturbance. This makes its use very limited.

(2) *Increase in tolerance to sodium bicarbonate*. This process is simple, requires no technical skill, no special apparatus, but the time element required makes it impracticable in the acute cases. For the chronic cases it would seem to be, in connection with examination of the expired air, the procedure par excellence.

(3) *Lowering of the carbon dioxide tension of the alveolar air and of the blood*. By the simplified methods introduced by Marriot and his associates, this is the most practical of all methods. This procedure makes the examination of the blood entirely unnecessary.

(4) *Change in reaction to phenolphthalein from alkaline to neutral, in the protein free filtrate from the blood serum*. This method is practicable and sufficiently accurate for ordinary purposes but requires a sample of blood.

(5) *Increase in ammonia output*. This would be very valuable information in all cases of carbohydrate disturbance, but in all other cases there is no increase in the ammonia output.

(6) *Increase in hydrogen-ion concentration of the blood*. This procedure gives entirely too delicate reactions. The concentrations do not reach sufficient proportions in ordinary cases to be of

practical use. Decided increase in hydrogen-ion concentration may be of value only as prognosticating immediate death.

This, we believe to be a practicable presentation of the value of the different laboratory methods of diagnosis.

It is the consensus of opinion that the Carbon Dioxide Alveolar Tension is the best guide to both diagnosis and treatment. The only difficulty is in infants and children and patients in unconscious states it is difficult to obtain the specimen of expired air. This, however, has been obviated by accumulating through masks.

#### DIFFERENTIAL DIAGNOSIS

Acidosis itself is usually easily differentiated. In a vast majority of instances it is a complication of other conditions and it may be exceedingly difficult to separate the symptoms of the primary condition from the complicating acidosis. My experience with acidosis as a primary condition is somewhat limited, as a condition complicating the nephritides, I find it comparatively common. In these cases it is usually associated with lowered total solid output, and lowered specific gravity,—rather a fixed specific gravity. The finding of the ketone bodies of course is pathognomonic; again this occurs only in carbohydrate disturbances and diabetes. Lowered carbon dioxide alveolar tension is the most trust-worthy criterion. Kusmaul's breathing and acetone odor to the breath, enlarged and tender liver, bright red color of the mucous membranes are all valuable differential points. If time permits, sodium bicarbonate tolerance gives valuable information.

#### DEFINITION

"Acidosis, therefore, may be very simply and correctly defined as a diminution in the reserve supply of fixed bases in the blood and other tissues of the body, the physico-chemical reaction of the blood remaining unchanged except in very extreme conditions. The definition should not be limited to the carbonates alone, but should include the other fixed bases of the body, likewise; the changes should not be limited to the blood but should include the other tissues as well. The subdivision of acidosis into compensated and uncompensated and into relative and absolute types is not particularly logical or helpful. Sharply localized accumulations of acid which do not produce any systemic effect should at least, be carefully distinguished from generalized metabolic disturbances and preferably they should not be considered as an acidosis."—(Sellard, p. 47.)

"Acidosis may be defined as a diminution in the reserve supply of the fixed bases of the blood and other tissues of the body."—(F. Clark, M. D., Omaha, Neb. Med. Journal.)

"Evidently it is a condition which may be brought about by the abnormal production of hydroxybutyric acid or acetoacetic acid. Yet there is no necessary connection between acidosis and

this one abnormality of metabolism, for other acids may also produce the condition. Moreover, the difficulty may be due, not to the excessive production of acid at all, but to an insufficient excretion in nephritis."—(L. J. H., Ox. Med., p. 495, Vol. 1, Part IV.)

#### PATHOLOGY

"In well marked and severe cases there occurs fatty infiltration of the liver. Free fat is found in the blood. Kidneys show fatty degeneration."—(Clark, Neb. Med. Journal, p. 39.)

Lackner and Gauss give the following in fatal cases: "There occurs in acidosis lipemia from the failure of the body tissues to utilize the fat in the blood." "Fatty degeneration of the kidneys resulting from acid intoxication. Anasarca, resulting from impaired external and internal respiration."—(Snyder & Welch, Neb., S. Med., Jour.)

#### TREATMENT

All the authors with whom I am conversant, except Joslin, advise the administration of alkalies. He advises rest, specified diets, and free ingestion of fluids. Of the alkalies advised, sodium bicarbonate is the alkalon of preference. It may be given per rectum, per orum and by intravenous injection. In mild cases the two former methods will usually suffice; in severe cases intravenous injection is the method of preference. It should be given in two to four per cent sterile solution. Results will depend very much upon the associated conditions. The effects will be very evanescent in cases of disturbed carbohydrate metabolism. In the nephritides the results will be very much more permanent.

Dr. Fisher, of Cincinnati, advises in cases of nephritis, where there is a tendency to coma, or an oedema, the use of hypertonic sodium chloride, and magnesium sulphate solution intravenously, believing them to be powerful dehydrating agents, on the assumption that the hydrophylic colloids yield their watery constituents better to magnesium sulphate than any other substance. He also advises concentrated glucose (dextrose) solution intravenously. "Sterile four to five per cent solutions in amounts from 100 to 200 cc. at a dose do very well. These injections too, must be given slowly, and it is better, for the reasons already discussed, to give several smaller injections than a single large one. Since the body uses up several hundred grams of carbohydrate in each 24 hours, an overdose of glucose can hardly be given. Such intravenous injections serve the purpose of furnishing food, while they produce at the same time the necessary dehydration."—(Diagnosis, Prognosis and Treatment in Nephritis, Lancet Clinic, Vol. 115, pp. 419, 431 and 443, 451, 1916; also Edema and Nephritis, J. Wiley & Son, N. Y.)

Glucose is given on the theory that it stops the

production of abnormal acids and furnishes nutrition to the depleted organism.

In cases where acidosis is due to impaired circulation the treatment of the condition is the treatment of the cause. Where it is due to impaired pulmonary ventilation the treatment may be more difficult, depending on whether it is due to pulmonary conditions *per se* or cardiac disturbances interfering with pulmonary circulation. In the primary cases alkalies should be pushed until the urine becomes neutral or faintly alkali to litmus.

#### URINARY LABORATORY METHODS

##### *For Acetone—Gunning's Test:*

To about five cubic centimeters of urine or distillate in a test-tube add five drops of strong ammonia and then Lugol's solution in sufficient quantity to produce a black cloud which does not immediately disappear. This cloud will gradually clear up and, if acetone be present, iodoform, usually crystalline, will separate out. The iodoform can be recognized by its odor especially upon heating (there is danger of explosion if the mixture be heated before the black cloud disappears), or by detection of the crystals microscopically.

(2) *Diacetic (Aceto-Acetic) Acid* occurs in the same conditions as acetone, but has more serious significance. In diabetes its presence is a grave symptom and often forewarns of approaching coma. It rarely or never occurs without acetone.

*Detection.* The urine must be fresh. If a preservative must be used, toluene is best.

*Gerhardt's Test.* To a few cubic centimeters of the urine add solution of ferric chlorid (about 10%) drop by drop until the phosphates are precipitated; filter and add more of the ferric chlorid. If diacetic acid be present, the urine will assume a Bordeaux-red color which disappears upon boiling. Several minutes boiling are required; simply bringing the fluid to the boiling point will not suffice.

*Martin H. Fischer.* Has recommended the testing of the urine with various indicators which show roughly the amount of free acidity, or hydrogen-ion concentration of the urine. The following table gives a number of convenient indicators for this purpose with the concentration in which they are used, the hydrogen-ion concentration which they represent and the color reactions:

*Indicator.* Methyl orange (0.5 grams in 100 c. c. H<sub>2</sub>O.). H-ion concn.-10<sup>4</sup>. Acid—Salmon pink. Alkali—Orange.

*Indicator.* Pananitrophenol (2 grams in 100 c. c. alcohol). H-ion concn.-10<sup>5</sup>. Acid—Colorless. Alkali—Green-yellow.

*Indicator.* Methyl red (0.2 gram in 100 c. c. alcohol). H-ion concn.-10<sup>6</sup>. Acid—Magenta, Alkali—Canary.

*Indicator.* Rosolic acid (0.5 gram in 50 c. c.



H<sub>2</sub>O, 50 c. c. alcohol). H-ion concn.-10<sup>7</sup>. Acid. Orange-yellow. Alkali—Magenta.

*Indicator.* Phenolphthelein (1 gram in 100 c. c. alcohol). H-ion concn.-10<sup>9</sup>. Acid colorless. Alkali—Bluish-red.

Patients whose urines show by this method, hydrogen-ion concentrations of 10<sup>6</sup> or less, are generally safe risks for an ether anesthesia, other things being equal; but those with hydrogen-ion concentrations greater than 10<sup>6</sup>, run more or less danger when subjected to a prolonged anesthesia.

Those whose urines react to methyl orange (H-ion 10<sup>4</sup>) are to be regarded as dangerous subjects. It is the usual experience with us to find the hydrogen-ion concentration of the first post-operative specimen of urine considerably increased over the pre-operative specimens. If the post-operative specimen reacts to methyl orange (H-ion 10<sup>4</sup>), active measures are instituted to reduce the acidosis as shown in H-ion determinations of the urine. (Fisher).

308 OPERA HOUSE BLOCK.

## Infections of the Uterus and Cervix and their Treatment\*

Franklin I. Shroyer, M. D., Dayton

**Editor's Note.**—It is Dr. Shroyer's conviction that the time is not far distant when the profession will come to recognize that infections of the cervix are the real causes of almost all diseased conditions of the female reproductive organs, as well as the causative factors in many conditions of general ill-health. He agrees with Sturmford that the cervical endometrium is the tonsil of the uterus. Not infrequently the treatment accorded women suffering from infections of the cervix only makes their previous condition worse and drives them to seek the consolation of the osteopath and Christian Scientist. Eventually some of these women have to undergo abdominal section and are abruptly plunged into the artificial menopause. All this, in Dr. Shroyer's estimation is unnecessary and can be avoided by the complete and early enucleation of the infected cervical mucosa, care being taken not to destroy the muscle so that function of the canal will not be lacking during future pregnancies. Most of the women, following conical enucleation of the cervix, can be cured of their leukorrhea, menstrual disorders, backache, nervous exhaustion and general ill-health and may be spared the dangers of ascending infections.

**S**IXTY PER CENT of all married women and thirty per cent of all unmarried women have infections of the genital tract.

These infections are almost invariably located in the cervical endometrium. The cervical mucosa is of an entirely different type from that found in any other part of the female genital tract, and from the nature of its structure and the arrangement of its glands it is well suited to become a focus of chronic, bacterial growth. Sturmford has called it the tonsil of the uterus. *The endometrium of the body of the uterus is practically immune to infection.*

Curtis reports the examination of about 117 uteri. In only a very small percentage of these had the endometrium of the fundus shown bacterial growth on culture, and the histological examination failed to disclose the presence of inflammatory tissue. The work of Hitchman, Kindrot, and Adler show the same findings.

*Lacerations of the cervix seldom produce uterine or pelvic symptoms. It is the presence of infection in the lacerations that causes disease.*

### UTERINE AND CERVICAL INFECTIONS AS A SOURCE OF GENERAL ILL-HEALTH

As a result of my operative and clinical work I am convinced that the time is not far distant, when we will come to recognize that infections of the cervix are the real causes of almost all diseased conditions of the female reproductive or-

gans, as well as the causative factors in many conditions of general ill-health.

*Endometritis* is one of the rarest of gynecological diseases, as I have stated in one of my previous papers; except, when resulting from traumatism, such as introducing foreign substances into the uterine cavity. The curette is used far too frequently, there is no excuse for the use of the curette, excepting for diagnostic purposes and removal of polipi and an old degenerated membrane and pedunculated fibroids. The condition alluded to as *corporeal endometritis* is the direct result of infection of the cervical mucosa.

I find in almost all cases of a severe endocervical infection that there is an accompanying thickening of cervical and uterine mucosa. This cervical mucosa must be gotten rid of by use of cervical curettage, because of it being the focus of infection.

### CAUSATIVE FACTORS

The germs that cause chronic endocervicitis are numerous, among the more frequent are the gonococcus, the streptococcus, the staphylococcus and the colon bacillus. Infection of the cervix in nulliparous women is frequent, although it is not at all limited to those who have had sexual intercourse nor are these infections always due to the gonococcus, but of the mentioned bacteria any one or several may be the causative factor.

### RESULTS OF INFECTION

Resulting from the various infections of the cervix we find the following diseases:

\*Read before the Montgomery County Medical Society, March 5, 1920.

(a) Transmission of infection both of the gonococcus and of other bacteria to the male.

(b) Leukorrhea which results from endo-cervicitis, producing both a mental distress and physical discomfort in women so infected.

(c) Disease of uterus and pelvic organs.

(d) Tubal pregnancy.

(e) Menstrual disturbances.

(f) Sterility.

(g) Cancer of the cervix.

(h) Appendicitis and sigmoiditis.

(i) Constitutional symptoms and disease.

We should therefore consider the serious consequences attributed to bacterial invasion of the cervical mucosa.

A new gynecology, based upon infection and liberated from all the dogmas and myths of the past has been put before you. Gynecology was one of the first fields entered by the surgeons and the last special branch to shake itself free from the shackles of tradition.

Do not the gastroenterologists consider that most of the diseases of appendix, gall-bladder, etc., are the results of infection? It has been definitely proven in the United States army recently that ulcer of the stomach and cholecystitis are direct infections from the tonsils. Why not then look upon the cervix as the tonsil of the uterus and its appendages?

The psychiatrists of today trace many forms of insanity to various focal infections. Gynecology has yet to recognize the causes of certain conditions as they truly exist.

We are learning, and will continue to learn, how inherited tendencies and secretions of the endocrine glands act to make one person susceptible and another resistant to infection; but until sufficient proof is forthcoming, we must still credit bacteria with the role as causative factors in the incidence of disease.

#### HISTO-PATHOLOGY OF ENDO-CERVICITIS

To thoroughly understand how an infected cervix or endo-cervicitis is responsible for the resulting pathological conditions mentioned, the anatomy, histology and physiological functions of the female generative organs must be studied.

I will endeavor, briefly, to indicate some of the pathological phases of endo-cervicitis.

Something should be known about the lymphatic glands of the uterus, they are generally so little mentioned, that we might forget they are present; nevertheless they have been carefully mapped out. The lymphatics of the uterus may be divided into two groups,—the lymphatics of the cervix, and the lymphatics of the body of the uterus. The lymphatics of the cervix uteri join those of the upper part of the vagina and empty into the sacral and superior iliac glands.

They start in the cervix as minute pin points, in close contact with the racemose glands of the mucosa; these converge, forming thin walled lymph channels which ascend between the muscle

fibers composing the myometrium. These in turn anastomose and form the lymphatic vessels which lie just under the peritoneal covering of the broad ligament, draining outward; those from the body of the uterus drain into the lumbar glands.

It is through these lymph channels that the infective bacteria and their products spread and not through the uterine cavity or mucosa before reaching the ovary. Infection on other parts of the body is carried by way of lymphatics. So reason would tell us that infection is carried to the body of the uterus and its appendages by the lymphatic system.

Hematogenous transmission of course is recognized, but Barber, Droper and Stewart have shown positively that ascending infections from the bladder through the ureter to the kidney are practically impossible except in the presence of severe damage to the ureter and its sphincter.

We have, therefore, an ascending intra-myometrial lymphangitis with its round cell infiltration and the implantation of the infective organism upon new areas, very often the tubes, and less often the ovaries. With a condition like this existing for many years is it not clear the destructive effect that will take place in the uterus, tubes, ovaries and adjacent abdominal cavity. It is a known fact that the uterine muscles possess inherent rhythmical contraction and that these contractions occur just as regularly but less frequently in the nongravid as in the gravid uterus, and it is largely by means of these contractions that the venous circulation in the uterus is accelerated as the veins of the uterus have no valves.

#### DYSMENORRHEA AND METORRHAGIA

These conditions tend to promote uterine drainage. A uterus that has been for a long time subject to this chronic lymphangitis, with its accompanying formation of fibrous tissues, will naturally be in a state of more or less inflammation and during menstruation uterine contraction will be painful. We thus have explained those conditions known as dysmenorrhea. Then there will be an extension upward of this inflammatory condition, by means of the lymphatics, producing a thickening of the ovarian tunic, which thickening will delay the rupture of the Graafian Follicle so that amenorrhea will be present or perhaps two follicles will rupture within a short time of each other, thus forming a double period, or one form of metorrhagia, and again at other times the Graafian Follicle, having ruptured, remains, on account of the thickening of the tunic unabsorbed, thus causing the prologation of the period, or another form of metorrhagia,—or metrostaxis.

#### OVARITIS, CYSTS AND TUBAL PREGNANCY

When a follicle ruptures and discharges the ovum, its walls at first collapse, but later the cavity becomes filled with blood and cellular tissue



of a yellowish color. The resulting structure called a corpus luteum slowly degenerates unless impregnation has taken place. If, however, the ovary is diseased this natural process has trouble in taking place and frequently remain unruptured.

In the infections of a less virulent or chronic nature the serous and muscular coats of the tubes become gradually thickened, the tunic of the ovary, as has been mentioned, also becomes thickened resulting in unruptured follicular cysts, while the plastic exudate forms bands of adhesions which kink the tubes and eventually drag them and the ovaries into the cul-de-sac. In some cases the tubes become partially or totally occluded, thus causing sterility, even if the spermatozoa escape the destructive action of the pus cells in the cervical canal. I believe that this thickening and loss of peristaltic motion of the tube are frequently the cause of tubal pregnancy.

#### CERVICITIS AND GENERAL ILL-HEALTH CASE REPORTS

I have stated that chronic, cervical infection can be the cause of serious, general ill-health. I want to give very brief histories of several cases operated upon:

*Mrs. A.*—Age 32, general ill-health before marriage, with bad leukorrhea, after marriage health continued to be bad, two children were born, ill-health continued. Several physicians advised operation for appendicitis. After thorough examination a diagnosis of chronic endo-cervicitis, right oöphoritis and possibly salphingitis was made.

We did a cervical enucleation and curettage, the microscopical examination being negative as to malignancy. The right ovary was cystic, tubes were inflamed, catarrhal and bound down by adhesions. The right ovary was partially removed, also the appendix; the tubes were not disturbed; an ichthyol and glycerin tampon was placed against the cervix and left for one day. Patient made an uneventful recovery and has better health than ever, and is still improving, one year since being operated upon.

Allow me to present another case:

*Mrs. B.*—Ill-health from date of first labor; after second labor health seemed to be worse. Patient wandered from one physician to another, with no results, every one gave her attention, but her symptoms all seemed to point to general condition. Her true condition at all times was a gynecological one,—an endo-cervicitis of mixed infection origin dating from the first labor.

A retro-version was present, which was given credit several times for her trouble. A cervical enucleation was done, and nothing more, excepting that the uterus, after light curettage was swabbed with iodine. The recovery of the patient was complete, although she received no medicine whatever after her operation.

All women patients in poor health should be

given a gynecological examination with especial attention paid to the cervix.

A young woman, 32 years old, had suffered for years with backache, leukorrhea, and pain in right and left abdomen, marked menstrual disorder, and a very general ill-health. She gave history of having been operated on four years ago, and as she stated everything that she had was removed, tubes, ovaries and uterus, but she was not well. Profuse leukorrhea, backache and general ill-health were still present. Upon examination I found she had still present the infected cervix. We removed the cervix,—the focus of infection, and the patient was cured of her old trouble.

#### DIAGNOSIS OF ENDO-CERVICITIS

Having outlined, as briefly as possible the way in which, I believe chronic infections of the cervical mucosa, cause the more important symptoms and diseases that I attributed to it in the early part of this paper, (excepting cancer of the cervix, which subject should be considered separately and will be taken up in a later paper), I will now consider the diagnosis of endo-cervicitis. It is so easy that little time need be devoted to its consideration.

Leukorrhea is present in all cases, varying from the profuse discharge of creamy pus seen in acute Neisserian infections to the yellowish or greenish tenacious secretion of the chronic endo-cervicitis; the mucosa at the mouths of Skene's glands will be found reddened, swollen and everted, and for many years two minute red points remain visible at the orifices of the glands, as a constant sign of a gonorrheal infection.

The cervix will feel harder than normal, and will be found studded with nodules varying in size from a pin point to a pea. They are caused by infection occluding the ducts of the racemose glands, causing retention cysts, little clear cysts, ovules of Naboth or Nabothian follicles and are pathological.

A discharge from the cervix will be seen, varying in character with the kind of infection and the length of time it has existed. The lips or edges of the external os are red, sometimes almost purple, more or less swollen and everted; there is constantly present in the chronic condition a discharge from the cervix like the uncooked white of an egg.

There is a proliferation of the cuboidal epithelium of the canal, which overrides the squamous epithelium of the vaginal surface, giving the appearance generally spoken of as an erosion of the cervix.

#### TREATMENT

The treatment of these conditions, heretofore, has been something along this line. Application of iodine, silver nitrate in strength varying from five to thirty per cent. Copper sulphate or nitric acid applications, followed with tampons of cotton or wool, medicated with ichthyol and glycerine,

boroglyceride, etc. Also electrical treatments, violet ray and radium emanation. Every patient received the usual round of gynecological treatments, the benefits of which went to the physician rather than to the patient. When ninety-five per cent of the treatments failed, for as sure as you live they do fail, the surgeon was consulted and almost always advised a curettage and very frequently an abdominal section.

With a carefully dilated cervical canal a very good temporary drainage was established; rest in bed, careful diet, regular bowels, and freedom from the worries of the household, the patient received temporary benefit.

Not infrequently, however, the use of the curette only carried the infection into the uterine cavity and inoculated a previously sterile corporeal endometrium; thus, the patient received no benefit from operation, and was truly and actually worse than before. Some patients actually die of septicemia, others are re-operated on or fall into hands of a man more experienced in gynecology, and frequently are saved from an abdominal section, while numerous others seek the osteopath and Christian Scientist.

Those who are re-operated on in course of a year or two, lose their other ovary and tube, if they were lucky enough to escape with them the first time.

Often super-vaginal hysterectomy was performed, giving the unfortunate patient no re-

lief, because the infected endo-cervix was left in place with its infection still present. What then can we do for these women who are so unfortunate as to have developed cervical infection.

Properly directed surgical interference offers, at present the only method of cure. The infected cervical mucosa must be entirely removed, for any portion remaining acts as further foci of infection.

*Therefore the cervical mucosa must be completely enucleated, care being taken not to destroy the muscle, for if the muscle is destroyed, during future pregnancies the function of the canal will be lacking.*

Some surgeons, when a complete enucleation is done, reline the canal with a flap of mucosa dissected from the vaginal portion of cervix. Others do not do a complete enucleation, but the inner third or half of the cervical canal is completely and thoroughly curetted with a special cervical curette and the outer two-thirds or one-half is enucleated, in such case the canal need not be relined.

Every woman thus treated can be cured of her leukorrhea, menstrual disorder, backache, and nervous exhaustion, and general ill-health.

Many of our mentally unbalanced women have been actually cured, physically and mentally, following conical enucleation of the cervix.

763-4 REIBOLD BLDG.

## Gonorrheal Inflammations in Women

Elisha Hughes Chapin, M. D., Columbus

Editor's Note.—From personal statistics, speaking in round numbers, Dr. Chapin concludes that an average of one-fourth per cent of women become infected with gonorrhea, and that an average of fifty per cent. of those who become infected require operative procedures in order to eradicate the disease. Dr. Chapin also emphasizes the fact that gonorrheal infections from sources other than coitus are so common that just consideration is demanded in history taking so as to avoid making blunders. It is also Dr. Chapin's opinion that very few, if any, cases of Bartholinitis and salpingitis ever recover spontaneously but require excision in order to effect cures; that few cases of infection of the cervix are confined, for any length of time, to that organ but sooner or later extend to the tubes and that infection of Skene's glands is persistently chronic and requires, in the majority of cases, excision.

**D**R. HOWARD A. KELLY, in his medical gynecology published in 1908, gives a rather comprehensive description of the history of gonorrhea and according to his investigation, reference was first made to it in the Old Testament, the fifteenth chapter of Leviticus. After a general review of the literature it seems reasonable to infer that primitive man and the gonococcus were created about the same era. Reference to the ancient literature of the Greeks and Romans convinces one that they knew considerable regarding the disease. In the nineteenth century, Bernutz, Goupil, and Noeggerath contributed much to our knowledge. However, not until the discovery of the etiological factor by A. Neisser, in 1879, did we begin to have a true insight

into the pathology and treatment. Previous to that time much confusion existed in regard to different bacterial types of pelvic infections.

### PREVALENCE

The disease is prevalent in all parts of the world inhabited by mankind. Not only does it choose for its victims the prostitutes, but it preys upon the health and vitality of the innocent women and children as well. So important has this phase of the subject become that the government is beginning to realize the necessity of suppressing the disease. Clinics have been established in many large cities for the care of patients with venereal diseases who are unable to pay for medical attention. The reporting of cases is being



more and more generally adopted by the medical profession and greater effort expended in trying to enlighten the public as to its dangers.

The government has a law against murder. Yet it has overlooked the importance of preventing a man marrying a virtuous young woman, infecting her with a disease which robs her of all her visional hopes of a happy home, the comfort of children and frequently hastens her to an early death. Let us hope that more drastic measures will be taken in the near future to prevent this calamity befalling the innocent.

#### STATISTICS

The statistical reports of such investigators as Zweifel, Prour, Sanger, Schwartz, Huber, Noeggerath, Kelly and many others estimate the prevalence of gonorrheal inflammations in women from ten to sixty per cent. The wide variance in the percentage can undoubtedly be accounted for by the class of patients in whom the investigations were made and the methods used in arriving at diagnoses. Taylor states that twelve per cent. is a very conservative estimate of gonorrheal inflammations as the cause of pelvic disorders. The report of a committee appointed by the American Medical Association, about ten years ago, for the purpose of investigating the cause of deaths in women from pelvic disorders revealed that eight per cent. resulted from gonorrhea.

Ashton says, "Gonorrhea is the most frequent cause of those grave pelvic lesions which result in the loss of life, sterility, or chronic invalidism." *The report of the Columbus, Ohio, Vice Commission of February 15, 1919, estimates that fifty-four per cent. of the young women of Columbus, Ohio, will probably become infected by gonorrhea.* My personal statistics are as follows: Three hundred and sixty-nine women examined showed *positive findings* of gonorrheal infection in eighty-four cases; *probable findings* in fifty cases, *negative findings* in two hundred and thirty-five cases. The diagnosis was based upon the microscopical, pathological and clinical findings before and after operations. Of the positive cases forty-three of the eighty-four were operated; of the probable cases, eleven of the fifty were operated; of the negative cases, fifty of the two hundred and thirty-five were operated. Of all the cases that had been operated on, in which a positive diagnosis had been made, sufficient pathological lesions were found to make the diagnosis conclusive.

*I feel that my statistics show reasonable evidence of the per cent. of women infected by gonorrhea, as the patients examined were of the average class and taken as they occurred chronologically. From these statistics, speaking in round numbers, it is conclusive, that an average of one-fourth per cent of women become infected, and that an average of fifty per cent of those who become infected require operative procedures in or-*

*der to eradicate the disease. How many of the forty-one positive cases which I did not operate have been or will eventually come to operation, I cannot state. To my knowledge a few have passed into the hands of other surgeons and have been operated on and the greater portion of the remainder have passed from my care.*

#### CHARACTERISTICS OF THE GONOCOCCI

The gonococci are diplococci, pus-producing bacteria, with a predilection for columnar epithelium. They are purely human parasites requiring no abrasions for inoculation and when exposed to the air soon die. The mucous surfaces lining the reproductive organs are their most favorable habitats. Invasions of the joints, lymph and blood channels, subcutaneous tissues and valves of the heart occur exceptionally. Immediately following their inoculation on mucous surfaces they begin to proliferate and manifest their first symptoms within twenty-four hours to seven days. However, considerable difference in opinion exists between such authorities as Ammon, Norris and many others relative to the incubation period.

The infection is an ascending one. The inflammation in the majority of cases extends by the way of mucous membranes. However, it is possible for the infection to be borne to adjacent organs by the blood and lymph. Such a condition is unusually rare and evidently occurs in conjunction with a secondary infection.

#### MODES OF INFECTION

The disease is usually contracted by coitus. The reproductive organs transmit the bacilli in the most favorable media, and under the most favorable conditions.

The number of cases coming to me for treatment with histories of other sources of infection is far too great to lead me to believe that copulation is necessary in order to contract the disease. Infected towels, bed linen, douche tubes, clothing, toilet seats and many other articles have been known to transmit it. In fact, infections from sources other than coitus are so common that just consideration is demanded in history taking so as to avoid making blunders. One with reasonable experience will soon discontinue considering lightly the possibilities of these sources of infection.

#### PATHOLOGICAL FINDINGS

The pathological involvement consists of a serous and cellular infiltration accompanied by a marked desquamation of the superficial layers of epithelium. Involvement of the female genitalia is subject to a wide variance, depending largely upon the condition of the mucosa at the time of exposure. If the victim happens to be a child, virgin, or a young married woman with thin and tender tissues, the infection manifests a more general and virulent type than in those having

borne children or having been subjected to coitus for a considerable time.

#### AREA OF INVOLVEMENT

Excepting children and young girls there are three areas in the female reproductive organs to which our attention should be directed in searching for gonococci: (1) the urethra, Skene's ducts; (2) vulvo-vaginal glands, ducts, and (3) the cervix. The greatest number taking origin in the urethra is a fact not surprising when one takes into consideration the position of the urethra and favorable medium produced by the urine.

While it is true that the urine tends to flush the urethra and eliminate many bacteria from the same it is known to be a very favorable culture-medium. It is my opinion that urethritis is much more prevalent than imagined, the symptoms being so mild and the condition having a marked tendency to spontaneous recovery, patients do not consult physicians in this stage of the disease, therefore, escape professional notice. Carefully obtained histories from patients suffering with chronic gonorrheal conditions will reveal symptoms of frequent burning urination some time preceding the onset of the trouble. I have learned by close inquiry into the history of nearly all cases, who consult me while they are suffering from chronic gonorrheal infections of the genitalia, that they give a history of having suffered from urethral involvements anywhere from one week to several months preceding the manifestation of their chronic symptoms. Frequently, as the acute urethral symptoms subside, the infection localizes itself in Skene's ducts, where it may exist, without the knowledge of the patient, over a period of years as a chronic source of infection. I am able to recall in my practice a number of cases with mild symptoms which have been referred to me by G. U. specialists, who were unable to effect a cure in their male patients owing to reinfections from the above mentioned sources.

Skene's or the periurethral glands are simple branched tubular glands and as first described by Skene there were but two in number. A third was later discovered and described by Schuller. They are located slightly internal to the external urinary meatus in the female urethra, one in each lateral wall and one in the anterior wall. The ducts of these glands, unless diseased are hardly perceptible to the naked eye. Their function, while not as yet definitely determined, is probably that of lubrication. Infection of Skene's glands with their later manifestations as granulations, eversion and caruncles of the urethra like infection of Bartholin's glands, later to be described, are stigmata of gonorrhea.

Bartholin's or the vulvo-vaginal glands are homologous to Cowper's or bulbourethral glands in the male. They are mucous or racemose glands, two in number, situated, one in each lateral wall of the vagina, the ducts of which are lined by

stratified epithelium. Their function is that of lubrication. Infection of these glands is practically always of gonorrheal origin usually bilateral and chronic when first seen by the gynecologist. The condition is accompanied by very mild symptoms and is one of the most dangerous sources of infection.

With a fair knowledge of the histology of the uterus it is readily understood why so much difficulty is encountered in treating the same when infected by gonococci.

The reticular connective tissue implanted with numerous deep-seated glands, the plicae palmatae of the cervix, crypts with lateral sacculations and sacs or ovula Nabothi create such a dense net work of construction that the infection is harbored in a manner most difficult to eradicate. Most radical has been the treatment in these conditions; violent curettements, applications of drastic remedies, and whole organs surgically sacrificed in order to effect cures.

#### TREATMENT

The mechanical construction of the female genitalia associated with an infection peculiarly characteristic, contagious, virulent, lurking, intractable and far-reaching, is productive of a difficult condition to treat conservatively with the hope of obtaining a cure. Over-zealous treatment is often accompanied by disaster, and improper treatment is of no value. The difficulties encountered by gynecologists are unlimited. Even the diagnosis is a keen and painstaking problem, requiring much search for the gonococci, especially in latent cases. It is quite evident that a definite solution of the treatment has not been made. The wide variance in recommendations made by different authors is not substantiated by results. The majority of cases are terminated by radical operations for the purpose of removing the involved organs, which in itself is acknowledgment of failure in medical treatment.

*It is my opinion, (1) that very few, if any, cases of Bartholinitis and salpingitis ever recover spontaneously but require excision in order to effect cures; (2) that very few cases of infection of the cervix are confined for any length of time to that organ, but sooner or later extend to the tubes; (3) that infection of Skene's glands is persistently chronic and requires, in the greatest portion of cases, excision.*

Much has been written in regard to the injection of the ducts of Skene's and Bartholin's glands, but permit me to say that I have found this procedure one of the most difficult and trying adventures in the practice of gynecology. The pretentious gynecologist waging war against gonococci with his ichthyol tampons, sprays, silver nitrate and iodine applications is a joke as such remedies only reach the vagina which in itself is seldom involved.

In the acute stage, if the patient happens to come under your care, rest, if possible in bed,



regulation of the bowels and diet and cleanliness of the involved parts by the use of hot sitz-baths and bichloride douches will accomplish all that can be expected. In this stage the time worn and malicious tampons and topical applications only produce irritation, dam back the secretion and greatly add to the discomfort of the patient.

In the chronic stage, determined by bacteriological findings, the location of the infection should be ascertained. If the symptoms point to the urethra an endoscopic examination should be made, the area of involvement determined, and treated accordingly. Abscesses of the vulvo-vaginal glands should be incised, drained and later removed.

The writer is of the opinion that but few cases of chronic gonorrheal infection of the cervix ever recover without surgical procedure. For those with a hope of recovery and where the attending

physician can be reasonably sure that the infection has not extended beyond the internal os, applications of silver nitrate in twenty per cent. solution, every two to four days, followed by mild antiseptic douches will accomplish all that can be expected.

#### SUMMARY

In closing, I wish to state that in the three hundred and sixty-nine cases which I have previously reported, but few came to my attention in the acute stage. Chronic involvements of Skene's ducts and the urethra were rare findings. The majority of the cases with a discharge from the cervix revealing a positive finding of the gonococci were complicated by involvements of the tubes. Excision of the vulvo-vaginal glands was necessary in every case in order to effect cures.

131 EAST STATE ST.

## Simple Goiter, a Public Health Problem\*

By Carey P. McCord, M. D., and Robert C. Walker, M. A., Cincinnati

Department of Industrial Medicine and Public Health, University of Cincinnati.

**Editor's Note.**—Presenting their original survey of the Simple Goiter Health Problem in Modern Medicine, Drs. McCord and Walker show how this condition becomes a proper matter for consideration and regulation because of its enormous incidence and because of the practicability of its control by general measures. Readily applied remedies of proved efficacy and of sufficiently low cost have been devised for its control. These measures, while not fully standardized, have been demonstrated to be harmless and simple of administration. The school age coincides with the age of the highest incidence of goiter, and the public, parochial and high school systems afford a splendid mechanism for carrying out the work of prevention.

**"S**IMPLE GOITER is probably the easiest of all known diseases to prevent." The prophylactic measures instituted by Marine and Kimball have yielded such results as to lead to the statement quoted. In widespread areas of the country the incidence of simple goiter is such as to involve 56 per cent of all women within certain age limits. Among men the incidence, although much less, is of such frequency as to be of definite significance. This occurrence of goiter is unnecessary in that it is probably wholly preventable through procedures carried out at trivial cost, and attended by no risks or inconveniences.

Any condition definitely disfiguring, and in many instances attended by disturbing manifestations, which involves hundreds of thousands of young women, demands systematic public health consideration. Particularly is this condition a practical public health problem through the necessity of applying generally, in goiter areas, the simple prophylactic measures so successfully carried out by Marine and Kimball in Akron and in other cities in Ohio.

#### EPIDEMIC OR SIMPLE GOITER

Simple goiter is the commonly encountered

"big neck," known to all the public in goiter districts. This form of thyroid enlargement embraces the types formerly designated as endemic, epidemic, and sporadic goiter. It also includes the forms designated in terms of periodicity as fetal goiter, goiter of adolescence, goiter of pregnancy, and, in anatomical terms, such forms as non-toxic, parenchymatous goiter, colloid goiter, cystic goiter, etc. In general, it is sufficient to note that simple goiter includes all cases of thyroid enlargement except toxic goiter, exophthalmic goiter, thyroiditis, and true thyroid neoplasms.

Simple goiter is a deficiency disease characterized by a non-inflammatory enlargement of the thyroid gland, unassociated in the greater number of occurrences by any marked functional disturbances. To the patient a simple goiter is a matter of concern usually for one or more of the following reasons: (1) The goiter is disfiguring; (2) the goiter, from its size or peculiar location, brings about symptoms from mechanical pressure on neighboring tissues; (3) constitutional disturbances actually attributable to the trivial thyroid deficiency, such as apathy, chilliness, constipation, asthenia are produced, or symptoms attributable to the mental state incident to apprehension over the enlarged neck.

\*From Modern Medicine, February 1920, Vol. II, No. 2, Page 124.

## THE PREVALENCE OF GOITER

The extent to which goiter prevails throughout the world is seldom appreciated. Few countries appear to be entirely free from it. In various portions of the globe there exist well defined extensive goiterous areas in which the large majority of the people are affected. Notable among these districts are portions of India, Switzerland, and Brazil. However, in countries that are not definitely looked upon as goiterous districts the incidence of simple goiter is remarkable. In France it was computed in 1874 that no less than one-half million persons presented simple goiters. In England and Scotland simple goiter is equally prevalent, especially in small areas such as Derbyshire and Nithsdale. The terms "Derbyshire neck" and "Nithsdale neck" are in common use among the public, and are indicative of their recognition of the prevalence of goiter in these two localities.

In the United States the entire Great Lakes Basin is regarded as a definite goiterous area. However, as the results of careful study and extensive surveys accrue, it is at once in evidence that simple goiter is widely distributed over many other portions of the country. It is difficult to estimate the number of persons afflicted and definitely to delineate the sections of the United States wherein goiter prevails. Numerous isolated investigations have been made, and from these it is possible to evaluate the significance and the prevalence of simple goiter in approximate terms for the country as a whole. The entire Great Lakes basin may be regarded as one large goiter district within which are numerous other centers, wherein the prevalence of goiter is even greater than for the area as a whole. Holder has described centers in Montana, Dakota, Mississippi, and, also, in the vicinity of the Rocky Mountains. Marine finds the disease widely disseminated along the Great Lakes, both among humans and animals, especially among sheep and dog. According to him, 90 per cent. of the street dogs of Cleveland are goiterous. Other centers have been described by Munson among the Indians; by Dock in Michigan; by Ashmead in Pennsylvania; in Montreal, Buffalo, Detroit, Cleveland, Islands of Lake Erie, Oregon and in Seattle. According to Bircher, goiter is common in the states of New York, Ohio, Virginia, Michigan, Kentucky, Tennessee, Maine, Vermont, Connecticut, Massachusetts, and New Hampshire. In general, the Atlantic states, with the exception of the western portions of New York and Pennsylvania, and the Gulf States, not including Texas, present a lower incidence of simple goiter than the Middle West and the western states. In the latter, wherever careful and extensive surveys are made, it is regularly established that simple goiter exists with such frequency, notably among young women, as to warrant public health concern.

## THE FREQUENCY OF GOITER

A study of the public school population affords the most accurate data of the frequency of goiter, inasmuch as the public school inclusive ages cover the period of its greatest incidence. The third decade, twenty to thirty, is the next period of greatest frequency. Marine and Kimball, in the City of Akron, Ohio, in April, 1917, examined 3,872 school girls between the fifth and twelfth grades inclusive. Of this number 2,184, or 57 per cent, were found to present simple goiter; 1,688, or 43 per cent, were found to be normal. All of the young women examined were in the second decade of life. The frequency increased with the years of age, being 41 per cent, for the years of 10 to 12, inclusive, and 60 per cent for the the years of 18 to 20. It is noteworthy that goiter is so infrequent among young males that it was not made a matter of study by Marine and Kimball in their Akron survey. In the second decade, goiter occurs about six times more frequently among girls than among boys. This sex predisposition is not fully accounted for, but probably finds origin from the fact that in the phylogenetic development of the thyroid gland this organ has always been more especially associated with the physiologic processes of the female, particularly with female generative function. In West Virginia, Clark examined 13,836 school children of 11 counties, in 1913, and found 1234 cases of goiter, which is 9 per cent of the number examined. In Virginia the same worker examined 6432 school children in the nine counties and found 817 cases of goiter, which is 12 per cent of the number examined. In Huntington, W. V., 50 per cent of the girl students were found to be affected. In Virginia, less than one-tenth of 1 per cent of the goiters found were among boys. In Europe, an even higher incidence among school children is reported. In Bavaria, the statistics of Schittenhelm and Weichardt indicate incidence as high as 77 and 89 per cent of the total school population.

The report by Hall of 3,339 students at the University of Washington is indicative of the frequency of goiter in the Northwestern states. This writer examined 2,086 men of the average age of 20 years and 5 months, and found that 18 per cent presented enlarged thyroid glands. Of the 1,253 women examined, with an average age of 19 years and 3 months, 31 per cent presented enlarged thyroid glands. Although these figures demonstrate the wide-spread prevalence of goiter in the northwestern states, they probably do not afford the maximum figures in that the greatest frequency occurs during the public school age rather than the university age. A certain percentage of enlargements existing at the time of puberty would have receded by the time of university age. Also it is known that simple goiter more frequently is encountered among the low types of individuals living under unsanitary con-



ditions, who would not be found in large numbers enrolled in a university.

Olson, working in Chicago, made examinations of 606 women and 193 men with ages ranging from 18 to 60. Among the women, it was determined that 18 per cent presented enlarged thyroids, and 7 per cent of the men were found to be affected.

Smith, an army surgeon, in 1918, examined 65,507 men of army age, 18 to 31, at Jefferson Barracks, and established an incidence of 1.63 per cent. The men examined were drawn from fifteen Mid-West states, including Texas. The highest incidence of goiter was observed in men from Oklahoma, where 38 per cent of 221 men examined presented goiter. The men from Texas presented goiters in 20 per cent of 141 men examined. Smith notes also that since compiling his statistics for fifteen states, exclusive of Idaho and Montana, recruits from these two states were examined and revealed a high percentage of goiter. Smith concludes that goiter is more common outside of the Great Lakes region than is usually considered, and that men are more frequently affected than reports would indicate. Kerr reports the occurrence of goiter among 21,182 troops at Camp Lewis, in Washington. These men were inducted into service from eleven states, comprising an area of approximately one-third of the United States. Of the number examined 21 per cent, or about 4,448, presented definite enlargement of the thyroid gland.

These several groups of data obtained by workers in various scattered localities are indicative of the existence of a high frequency of simple goiter among our young population, especially among young women.

No figures are available permitting any reliable estimation as to the total number of persons in this country, or any large portion of it, presenting varying degrees of this malady. An extension of Marine's figures obtained at Akron to apply to all within a school age in Ohio and other states of the Great Lakes basin will naturally be only of approximate correctness. It is recognized that Akron, being nearer the Great Lakes district, will present a higher percentage of affected persons than will such cities as Cincinnati, situated at the periphery of the Great Lakes goiterous region; but even in such cities a high incidence of simple goiter may be noticed wherever groups of women are observed. With a full recognition, of the gross inaccuracies entailed Marine's figures are extended to afford some basis of a conception of how significant simple goiter is as a public health problem.

There are in Ohio by the figures of the last census, 2,332,362 women; 432,851 are between the ages of 10 and 19 inclusive. This is the period of the greatest incidence of goiter, and is the age investigated by Marine. If the condition of the 56 per cent of involvement established in Akron obtained for the entire state of Ohio, 242,-

376 young women of the second decade would present goiter. At once it is to be emphasized that these figures apply to but one decade of one sex, and do not include the very high incidence of goiter in women of the third decade. Similar estimations for other states of the old Great Lakes basin, and for other known goiter areas, yield a total figure of involvement that warrants earnest action. These figures become peculiarly pertinent in terms of the simplicity of the measures by which a continuation of this condition may be obviated.

#### GOITER IN ANIMALS

Goiter is not a disease confined to humans, but is found in large numbers among animals in goiter areas. It is perhaps an index of our comparative concern in human and animal welfare that goiter among animals has been the object of many practical prophylactic measures, whereas in the same district the occurrence of goiter among humans has been the object of scanty prophylactic consideration. The instances of the occurrence of goiter among animals here referred to are largely obtained from the publication of Marine. Among animals, as is true for humans, the greater number of goiters occur among the female. This is especially true of swine and sheep. Marine has already been quoted above to the effect that 90 per cent of the dogs of Cleveland are affected with goiter. The early days of the sheep industry in Michigan were found to be unprofitable in that a large percentage of the animals presented goiters. The young were many times "runts," failing to grow even when supplied suitable food, and yielding an unsatisfactory quality of wool. The abandonment of this industry was contemplated, but a fortunate discovery turned this industry into profitable channels. During the years of high frequency of goiter among sheep the salts fed these animals were obtained from a remote source. Coincident with the time of the contemplated abandonment of the sheep industry, but having no other connection with it, salt mines were opened up in the vicinity of Detroit. Shortly after the substitution of this locally obtained salt it was readily observable that the sheep so fed were better in every respect, the young were born free of goiter; they did not subsequently develop goiter, and were in all respects normal. Careful investigation established the fact that the locally supplied salt contained as an impurity minute traces of iodine salts. The small quantity of iodine was adequate to meet the requirements of the sheep, and thus this condition in Michigan has been largely eliminated. In Montana, North Dakota, South Dakota, Washington, Minnesota, and portions of Canada, there are extensive areas in which practically all types of domestic animals present manifestations of hypothyroidism associated with enlarged thyroid. In Montana alone, G. E. Smith reports that about one million young pigs were lost annually on ac-

count of this disease. The condition was present at birth, the young pigs being born hairless and generally stunted. Many were dead at birth and few survived more than from twenty-four to thirty-six hours. The affected areas in some instances are sharply demarked. At times the district is confined to so small an area as a creek bottom one-half mile wide. Farmers have established that if their brood sows are moved out of these areas up into the hills a mile or two away, normal pigs may be born. Chemical examination of the thyroid glands of affected pigs determined that although the glands themselves were large, goiterous, the iodine content was extremely low in comparison with normal pigs. In general, the iodine content of the gland varied inversely with the degree of stuntedness of the animal's development. The addition of small quantities of iodine salts to the food of sows practically eliminated this condition among the sows so treated. In all instances normal pigs were born.

In goiterous regions not only are land animals subject to goiter, but fish as well. Seldom is goiter encountered in the native state of fish in streams; but under conditions of artificial propagation, such as those carried out by the Bureau of Fisheries, a disease known as thyroid carcinoma has been recognized for a long time. Only in recent years, however, has this condition been established as a simple goiter alike in many respects to the goiter of man and domestic animals observable in the same area. It has been noted that fish that developed goiter under artificial living conditions lost their goiters when placed in open streams. Also, it has been observed that the amount of goiter in any hatchery was in proportion to the uncleanness and general lack of sanitation of the hatchery in which the fish propagated. So frequent and so disastrous was this condition at the time prior to its recognition as simple goiter rather than a true carcinoma, that fish culture in goiter areas was on the verge of being discontinued. Through the work of Marine and Lenhart both the nature of the disease was established and simple means were evolved for its eradication. In general these measures consisted of continued cleanliness of the fisheries, the supplying of food containing proper constituents, but particularly the addition of small traces of iodine or iodine salts to the living water of the fish. Wherever they have been instituted, these measures have eliminated goiter in fish.

#### THE CAUSE OF SIMPLE GOITER

Consideration of the cause of simple goiter involves: (1) a precise exciting agency; and (2) conditions and factors that favor the development of goiter. No final statement may be made as to a precise causative factor. According to Crotti, St. Lager refers to 378 writers who offer 42 different theories as to the excitant, most of which are manifestly untenable. For a full consideration of the specific causes of goiter, reference

should be made to the publications of McCarrison, Crotti, Marine, and Zueblin. The chief theories advanced center around either soil, water supply, microbic infection, or organic toxins. Precise evaluation of the various evidences offered does not permit of final acceptance of any single one of the four. Whatever be the specific cause, simple goiter may with some justification be regarded as a deficiency disease which tends to appear with greater frequency under conditions of living and working which can largely be controlled by proper hygienic and sanitary measures; such conditions are over-work, over-crowding, poor ventilation, bad water supply, lack of proper personal hygiene, the improper disposal of sewage, abnormal menstrual function, worry;—anything that makes undue demand upon the physiologic function of the thyroid contributes to the development of goiter.

#### THE PREVENTION OF SIMPLE GOITER

"Simple goiter is probably the easiest of all known diseases to prevent." From the figures cited above it is evident that each year many new thousands of cases are developing. After development simple goiters are not readily amenable to treatment, only about 30 per cent subsiding under medical treatment. The usual history of the goiter is for it to develop about the time of puberty, slowly but progressively to increase in size for a number of years, and to recede spontaneously at some time during the third decade. A great many, however, persist throughout life, and a few develop into true exophthalmic goiter. In definite goiter areas every young girl is a potential goiter victim. Whatever be the nature of the deficiency bringing about the goiter, it can be substituted for by making available to the body small quantities of iodine through the oral administration at rare intervals of iodine salts. For two cents a year any child may be saved the disfigurement and the physical and mental disturbances accompanying goiter. The necessity of obviating goiter because of its economic and sociological import was recognized so early as 1848, when a goiter commission was appointed by the Sardinian government to investigate and report on the causes, treatment, and prevention of goiter. This example was followed in 1864 by the French government. In 1908, Switzerland created a goiter commission and more recently Italy has done likewise.

Although the administration of the salts of iodine has long been associated with both the treatment and prophylaxis of goiter, both among humans and animals, not until the recent work of Marine and Kimball were systematic measures devised and instituted for the prevention of goiter in humans. Since this time these measures, without having come into any general recognition in this country, have been recommended to the Swiss government for adoption as a national measure.

The incipency of goiter in the great majority



of cases occurs in the second decade, in the ages from ten to twenty years, at which time the greater number of persons of such ages are in school. The school organization with the school physician, the school nurses, or the intelligent teacher, affords the best mechanism for the carrying out of the simple medical procedures entailed. Twice yearly, at six month intervals, iodine salts should be administered in small doses over a period of ten days.

Any iodine preparation suitable for oral administration will provide the necessary iodine requirement for the thyroid. Potassium and sodium salts of iodine are equally efficacious, which renders the sodium salt the medicament of choice because of its low cost. Because of the deliquescence of sodium iodide, it is impractical to make use of this material in capsule form. In whatever manner the iodine material is administered, it should be accompanied by careful educational measures, in order that the rationale of these procedures may become common knowledge to all, so that these measures may be continued in post-school life.

The details of the measures advocated and carried out by Marine and Kimball are as follows: The prophylactic work was limited to girls. A careful census was made of all girls between the fifth and twelfth grades, inclusive. A suitable card was devised on which was recorded the results of physical examination with particular reference to the condition of the thyroid. Particular care was exercised that no person presenting manifestations of exophthalmic goiter should be subjected to the harmful action that iodides have on this infrequently encountered type. Both the young women free from goiter and those presenting simple goiters were treated with sodium iodide. Large groups, with and without goiter, were untreated and served as the basis of reckoning the results of treatment. The doses used and the duration of treatment are probably in excess of actual iodine requirements, but because of the known harmlessness of the material used it was deemed expedient to provide an excess. Subsequent developments may establish that a single dose of the iodine material is sufficient. Two grams (30 grains) of sodium iodide, divided into 0.2 gram (3 grains) doses were given each school day to each pupil in the fifth, sixth, seventh, and eighth grades. Each pupil received 3 grains of the material each day for a period of ten days. For the ninth, tenth, eleventh, and twelfth grades, the daily dose was doubled under the same conditions. It was recommended that these amounts be administered twice annually, May and December being suggested as the most suitable months. The material may be given at the school under the supervision of teachers or nurses. Bottles of the sodium iodide solution were distributed to the several schools. The solution was so prepared that the suitable dose was dissolved in 5 cc. of water, which in turn may be measured out to the children

in small graduated glasses, which are obtainable at low cost. It is pointed out that from 25 to 30 mg. of iodine saturates the normal thyroid gland and, inasmuch as approximately 1,700 mg. are available in the doses given, obviously the iodine requirements are fully provided for; in fact, it is reasonable to believe that in giving so large a dose a prodigious waste of the medicament takes place. Among the 4415 girls under observation no harmful results arose, except in that 0.5 of 1 per cent developed an iodine rash, which is of only trivial import and which quickly disappeared upon the termination of the treatment. Such measures were carried out by Marine and Kimball first among 3,872 girls, and, later, among the same group with an increase up to 4,415 girls, and the following results were obtained: of 283 girls having normal thyroids at the time of the inauguration of the treatment, not a girl developed an enlarged thyroid; 100 per cent remained normal. Of 996 pupils having normal thyroids at the outset, who did not take treatment, only 637 remained normal from April to November, 259, or 26 per cent, developing slight goiters. Of 428 women having small goiters at the time of the inauguration of treatment, in 33.5 per cent the goiters wholly disappeared under treatment, while of 769 women having small goiters who did not submit to treatment in only 1.2 per cent the enlargement spontaneously disappeared. In other words, these prophylactic measures have reduced, in Marine's observations, the normally high incidence of goiter to zero.

#### SUMMARY

The prevalence of simple goiter described above is common to many portions of this entire country. Low cost and readily applied measures have been devised for the eradication of this condition. These measures, although not yet fully standardized and simplified, have been demonstrated to be harmless and practicable. The school age coincides with the age of the highest incidence of goiter. The public and high school systems afford a splendid mechanism for carrying out these measures. It is believed that faithful application of these measures by public health workers, school, and industrial physicians will go far in stamping out this widespread and distressing malady.

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## Pulmonary Tuberculosis as a Sequella of Influenza\*

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Editor's Note.—While the recurrent epidemic of influenza during 1919 incapacitated thousands, pursued a milder course, was complicated by relatively fewer pneumonias and its death rate did not reach the appalling figures of the previous pandemic of 1918, yet it would appear, according to the records collected by Drs. Douglass and Brown, that the recurrent epidemic was followed by as great a variety of subsequent pulmonary lesions. A treacherous feature of the activated cases was that 40 per cent. had a non-symptomatic period averaging five months following influenza, during which, in many instances, the patients returned to work. The tendency in these cases was toward a delay in diagnosis by ascribing the tuberculous symptoms to bronchitic sequellae of influenza and therefore supposedly benign and temporary. Contrary to other observers, Drs. Douglass and Brown believe that influenza has been and will prove to be a dominant factor as an activator and reactivator of dormant tuberculosis lesions, and that vital statistics will prove it.

**D**ETAILED and concise records of epidemic influenza date back to the early history of medicine.

The first epidemic in America, which occurred in 1647 and swept the whole of New England, attacking the Indians and the English, French and Dutch settlers, was well described by Wm. Hubbard.

The description of the succeeding epidemic, that of 1789, by Dr. Benjamin Rush, is a classic. Rush, as Hinsdale states, "had the unusual faculty and patience to set down the minute details of cases as they came under observation." The account reveals a remarkable parallelism between the epidemic of 1789-90 and that of 1918-19.

After an interval of 27 years, during the fall and winter of 1817, another epidemic occurred which, in an interesting way, was described by Daniel Drake, a U. S. Army surgeon, stationed at a frontier post in the Ohio Valley. He describes the epidemic as sweeping from east to west, first attacking the men of his garrison, secondarily the people of the surrounding town, and finally penetrating to the scattered inhabitants of the country districts. He states: "I need not give the history of any other prevalence as this illustrates the most constant of the laws which govern influenza: *First*, its progressive extension from east to west; *second*, its independence of all sensible conditions, and *third*, its outbreak in bodies of men and in compact settlements." Drake closes his account by a de-

scription of the pulmonary sequellae, particularly purulent pleural effusions.

The next epidemic occurred in 1890 and is within the memory of most of us.

The pandemic of 1918 differed from the epidemic of 1919 in that the proportion of acute rapidly-fatal cases was smaller; the period of the epidemic was shorter and the total number of persons affected was less.

*The recurrent disease, while it incapacitated thousands, pursued a milder course; complicating pneumonias were relatively few, and the death rate did not reach the appalling figures of the previous eruption; yet, it would appear that the recurrent epidemic was followed by as great a variety of subsequent pulmonary lesions.*

### CLINICAL FEATURES AND BACTERIOLOGICAL FINDINGS

The clinical features of the epidemic were the same, wherever it occurred, varying only in degree of intensity.

The diversity of bacteriological findings has been of interest. What part the bacillus of Pfeiffer plays is difficult to determine. The most carefully devised and thoroughly undertaken experiments with Pfeiffer's bacillus have failed to produce the disease in human beings, even when the bacilli have been freshly isolated and sprayed in enormous quantities into the nose and throat of volunteers. Later investigations showed it in all probability to be simply an associate organism, as in most instances the influenza bacillus was not found in pure culture. In the vast

\*Read before the Knox County Medical Society, Mt. Vernon, O., April 14, 1920.



majority there have been other organisms in association, usually the pneumococcus and the streptococcus.

In an article on "Vaccines and Influenza," the *Journal of the American Medical Association* states, "The organisms most frequently associated with Pfeiffer's bacillus, and chiefly responsible for the gravity of the secondary pulmonary complications are the pneumococcus and streptococcus." The *British Medical Journal* (Nov. 16, 1918) states that "The influenza bacillus, the pneumococcus, and above all in this epidemic, the streptococcus, seem to be responsible for most of the serious complications of influenza." McConnell (Camp Devans) states: "It is evident and recognized by all that the serious symptoms were not due to the presence of the bacillus influenza, but were the result of invasion by secondary organisms, these being mainly pneumococci and streptococci."

The literature on the subject has reached voluminous proportions during the past year. All of the phases and those of the immediate complications have been discussed. Little has been written concerning the more remote sequelae, the most important of which is pulmonary tuberculosis.

#### INFLUENZA AS A PREDISPOSING FACTOR IN TUBERCULOSIS

Sufficient time has now elapsed since the pandemic of 1918 to show the influence of this infection as a predisposing factor in pulmonary tuberculosis, and as an agent for the re-activation of a healed or quiescent tuberculous lesion. We are beginning to see all over the country as occurred following the epidemic of 1890, a material increase in the tuberculosis morbidity and mortality. Clinical and pathological studies of a generation have given a substantial basis to the dictum that among human races subject to contact with civilization that: "Tuberculous infection is universal, while tuberculosis is relatively rare." The former condition, as Sewell so well states, signifies that tubercle bacilli have penetrated the body and lie dormant somewhere, commonly within the lymphatic glands, usually after having excited only sufficient tissue-reaction to clothe them with a specific envelope which we know as tubercle. Certain definite, but unknown changes stimulate the dormant tubercle bacilli, and inflame them to active metabolism and reproduction, resulting in a progressive invasion of the tissues of the host, with such modification of structure and function as to give rise to detectable signs and symptoms, which typify what we know and recognize as "clinical tuberculosis."

It has long been recognized that many tuberculosis patients date the onset of their disease as concurrent with an attack of influenza. Tewksbury, in an article published early in 1919, states: "There will probably be an increase in active tuberculosis due directly to the influenza epidemic."

Amberson and Peters make the following statement: "In taking the histories of patients recently entering the sanatorium, we have met with a fair number of cases in whom the development or exacerbation of manifest tuberculosis followed an attack of influenza." Berghoff reports recently fifty per cent of quiescent or healed tuberculosis showing a reactivation and a positive sputum after an attack of influenza.

Minor states, "I would wish to stress the fact that the carefully taken histories of the large majority of patients who have come to me since the Spring of 1919, demonstrate very clearly that this epidemic had a disastrous effect in initiating active trouble in people who had been hitherto perfectly well, or in reawakening processes in those who had given a history of an arrest in the past."

#### OHIO STATE SANATORIUM RECORDS

*Our records show that epidemic influenza has had a decided etiological relation to tuberculosis. Forty per cent of 615 tuberculous patients admitted to the Ohio State Sanatorium since January 1st, 1919, attributed their active tuberculosis symptoms to influenza. Of the 249 cases, 67 per cent had a negative tuberculous history prior to the epidemic of October-December 1918, as far as we could determine, while in 33 per cent (or 13 per cent of total admissions) classified as reactivated, a definite or suspicious history of a previous tuberculosis could be elicited. Sixty-two per cent of the entire group had positive tuberculous sputum, which is about the percentage we would expect to find in the average series of admissions.*

TABLE I.  
TOTAL ACTIVATING EFFECT OF INFLUENZA

	Admissions	Activated Tuberculosis	Per Cent	Re-activated Tuberculosis	Per Cent	Total	Per Cent
Ohio State Sanatorium, fifteen months .....	615	166	27	83	13	249	40
Michigan State Sanatorium .....	190	68	35	23	12	91	47

TABLE II.  
SPUTUM STATISTICS

	Total Influenza Cases	Positive Tuberculous Sputum	Per Cent
Incipient .....	68	20	30
Moderately advanced .....	87	54	62
Far advanced .....	94	80	85
Total .....	249	154	62

These statistics carefully exclude those whose history does not show frank influenza with dis-

tinctive symptoms: *i.e.*, coryza, acute bronchitis, hyperpyrexia, prostration, joint pains, etc. We have in mind the common confusion of tuberculous exacerbations or "flare-ups" with influenza.

A feature of the activated cases was that 40 per cent had a non-symptomatic period averaging five months following influenza, during which, in many instances, the patient returned to work. The tendency in these cases was toward a delay in diagnosis by ascribing the tuberculous symptoms to bronchitic sequellae of influenza and therefore supposedly benign and temporary. The characteristic letter from the physician is as follows: "When can you admit Rose S....., age 25, telephone operator, who had influenza in December, failed to recover and later found tubercle bacilli in the sputum?"

The reactivated cases for the most part had continuous symptoms following influenza and a large per cent submitted themselves for examination and treatment at an earlier date. As to status or stage of disease, our series shows no marked deviation from that of the average of our admissions. Our classification of the group was as follows: Sixty-eight incipient; 87 moderately advanced, and 94 far-advanced.

Of the above cases, practically all exhibited clinical signs of tuberculosis and these signs were definite in 32 of those showing negative sputum, making a total of 181 or 75 per cent of 249 cases which can be said to be unmistakably tuberculous. Non-tuberculous post-influenzal infection could not be attributed to more than 10 per cent of our cases.

#### OTHER STATISTICS

The above statistics are also quite uniform for the Missouri State Sanatorium and the North Carolina State Sanatorium. The Michigan State Sanatorium states:

"In making a survey of about 190 patients we find that ninety-one or 45 per cent had a well-defined attack of influenza. Of these twenty-three or 12 per cent had tuberculosis before the influenza. One might consider that influenza was the causative factor in the remaining 35 per cent."

The Franklin County Sanatorium states: "We admitted 329 patients from January 1st, 1919, to March 1st, 1920, of that number 18 per cent gave a history of influenza as a predisposing factor."

The Department of Health of the city of New York reports 2233 new cases of tuberculosis in the last quarter of 1918 and 3794 new cases in the same quarter of 1919; an increase of 70 per cent. The data of the Ohio State Registrar of Vital Statistics for a four months' period beginning July 1st, 1919, shows an increase of five hundred deaths from pulmonary tuberculosis over the corresponding period of the previous year, when our death rate was 6445, or 122.2 per 100,000 of population.

Our experience is at variance with the conclusions of Fishberg\*, in that *we believe that influenza has been and will prove to be a dominant factor as an activator and reactivator of dormant tuberculous lesions, and that vital statistics will prove it.* We believe that his conclusions were immature, as they were acquired from data secured prior to November, 1919. Gramm's survey of Buffalo, N. Y., was made with the assistance of lay inspectors two months after the epidemic and is, of course, valueless.

#### INCIDENCE OF EPIDEMIC INFLUENZA IN ACTIVE TUBERCULOUS PATIENTS

A rather striking feature of the epidemic was its course in the active tuberculous patient. When he was attacked, the course was usually mild; reports showing many cases with lung collapse (artificial pneumothorax) recovering. Pottenger believes the actively tuberculous to be relatively immune; only 5.4 per cent of 1551 cases at the Chicago Municipal Tuberculosis Sanatorium contracted influenza. Stivelman at the Bedford Sanatorium reported similar conditions. Murphy, surveying conditions in Massachusetts institutions, arrived at the conclusion that: "*A low grade of inflammatory process of the respiratory tract confers a marked degree of immunity against a frank invasion of influenza.*" Armstrong, of Framingham, Mass., states that while 16 per cent of the entire population was infected by influenza, only 4.1 per cent of the tuberculous group of the community were infected. *The Ohio State Sanatorium, with a patient population of 185 was entirely free during both epidemics. Not a single case developed. During the 1918 epidemic a rigid quarantine was enforced. During the 1919 epidemic no regulations were in effect. It is perhaps reasonable to suppose that these "open" cases have a considerable immunity to the associated organisms of influenza, also it is just as reasonable to presume that the open-air-hygenic regime was a considerable factor in their protection.*

Records of the epidemic in army cantonments show that where regulations as to ventilation and the control of the cough were enforced and "spit cups" were issued the epidemic was greatly controlled.

#### CONCLUSIONS

1. Epidemic influenza produces a lessened resistance to tuberculous exacerbations and is a definite etiological factor in the production of the disease.

2. The tuberculosis mortality and morbidity statistics will show a considerable increase for 1920 and 1921.

3. It would appear that active "open" tubercu-

\*"I have not met a single case of phthisis during the past year which could be ascribed to have followed influenza. Epidemic influenza has not etiological relation to tuberculosis."



lous cases exhibited a relative immunity to the infection.

4. The enforcement of general prophylactic measures proved of great importance in the control of the epidemic.

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## Studies of the Effect of Ether on Experimental Tubercle Bacillus Infections\*

J. B. Rogers, M. D., Cincinnati

**Editor's Note.**—In continuing the experimental work of Corper, Brown and Petroff, Dr. Rogers challenges the efficacy of the so-called Savage etherization treatment of peritoneal, meningeal and pulmonary tuberculosis, reported to the Ohio State Medical Association several years ago. In his studies Rogers has found that ether anesthesia in tuberculously infected guinea pigs fails to exert any inhibitory action on the progress of the tubercle formation or to prolong the life of the animal. Neither does ether anesthesia reduce the resistance of tuberculously infected guinea pigs. The danger of harming positive sputum cases of pulmonary tuberculosis by causing aspiration of the infected material into non-infected areas, as well as the direct irritating effect of the ether on the inflamed pulmonary tissue must not be overlooked. It is to be hoped that Dr. Rogers will pursue his studies until he is able to report on the agent and method of selection for anesthesia in operations on the frankly tuberculosis.

IN A RECENT article, Savage<sup>1</sup> reported certain observations made on patients suffering from peritoneal and pulmonary tuberculosis. He states that following ether anesthesia given by the so-called closed cone method, some of them showed a marked improvement which began immediately after the anesthetic and continued until there was complete recovery. Cases of far advanced pulmonary tuberculous involvement often showed a marked improvement lasting for several months. From these observations, he advanced the opinion that ether anesthesia may be used in practically all forms of tuberculosis with advantage, and without danger to the patient.

#### INVESTIGATIONS OF CORPER, BROWN AND PETROFF

Following this came the report of Corper,<sup>2</sup> who attempted to reduce the resistance of tuberculously infected guinea pigs by complete ether anesthetics. He divided the pigs into two groups with controls for each and inoculated all of the animals with a virulent culture of human tubercle bacilli. One group was etherized daily for fifteen days and was killed and examined on the forty-second day. A comparison of the lesions in the etherized and the non-etherized control animals showed no particular difference. The second group was etherized every other day throughout the entire period of infection consistent with the life of the animal. After compar-

ing the lesions found in this group with those in the controls, he drew the conclusions that ether anesthesia produced no appreciable effect upon the course of the macroscopic anatomic tuberculosis in the guinea pig.

Brown and Petroff<sup>3</sup> also tested the influence of ether on experimental tuberculosis. Guinea pigs were infected by an injection of virulent human tubercle bacilli and divided into different groups, some of which were etherized at weekly intervals, while others were etherized daily. At death of the animals, the lesions were noted and found comparable with those in the non-etherized controls. From this they concluded that little evidence could be drawn to show that etherization exerted any beneficial influence on experimental tuberculosis in the guinea pig.

#### FURTHER INVESTIGATION

Patients giving a history of ether treatment by the closed cone method, were in active far advanced stages of the disease when admitted to the Cincinnati Tuberculosis Sanatorium. Certain cases were treated at this Sanatorium with ether under the direction of Dr. Ernst Zueblin with unsatisfactory results.

In view of these facts and inasmuch as inquiries were received in regard to the ether treatment of tuberculosis, we planned experiments along similar lines to those conducted by Corper, Brown and Petroff. Differing slightly from these experiments, however, we infected our pigs through the respiratory tract, feeling that if any effect was to be had from ether inhalations it

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might best be demonstrated in this way, as the ether would have more favorable opportunity of coming directly in contact with the tuberculous process. Two experiments were made as follows:

*Experiment I.*—On January 12, 1920, 10 guinea pigs were infected by placing them in an atmosphere which contained a finely atomized aqueous solution of tuberculous sputum. They were then divided into two groups of five pigs each. One group was given complete ether anesthesia eleven days in succession, the first etherization immediately following the spraying; the other group was used as control. Death occurred in both groups as follows:

ETHERIZED GROUP		
Infected	Died	Duration of Disease
Jan. 12, 1920	Feb. 3, 1920.....	22 days
Jan. 12, 1920	Feb. 6, 1920.....	25 days
Jan. 12, 1920	Feb. 19, 1920.....	38 days
Jan. 12, 1920	Feb. 21, 1920.....	40 days
Jan. 12, 1920	Feb. 28, 1920.....	47 days
Total .....		172 days
Average duration .....		34.4 days

NON-ETHERIZED GROUP		
Infected	Died	Duration of Disease
Jan. 12, 1920	Jan. 28, 1920.....	16 days
Jan. 12, 1920	Feb. 14, 1920.....	33 days
Jan. 12, 1920	Feb. 17, 1920.....	36 days
Jan. 12, 1920	Feb. 20, 1920.....	39 days
Jan. 12, 1920	Mar. 6, 1920.....	54 days
Total .....		178 days
Average duration .....		35.6 days

*Experiment II.*—The experiment was repeated on eight guinea pigs, the animals being infected by a similar method as used in Experiment I, and divided into two groups of four pigs each. One group was etherized eleven days in succession, the first etherization again following the infection. The second group was used for control. Twelve days after infection, one pig from each group was killed and examined and the remaining eight were autopsied five days later. The lesions in the lungs were marked from + to +++++, + indicating a minimum and +++++ the maximum amount of tuberculous involvement.

ETHERIZED GROUP		
Infected	Autopsy	Lesions in Lungs
Feb. 28, 1920	Mar. 11, 1920.....	+
Feb. 28, 1920	Mar. 16, 1920.....	++++
Feb. 28, 1920	Mar. 16, 1920.....	++++
Feb. 28, 1920	Mar. 16, 1920.....	++++

NON-ETHERIZED GROUP		
Infected	Autopsy	Lesions in Lungs
Feb. 28, 1920	Mar. 11, 1920.....	+++
Feb. 28, 1920	Mar. 16, 1920.....	++++
Feb. 28, 1920	Mar. 16, 1920.....	++++
Feb. 28, 1920	Mar. 16, 1920.....	++++

From Experiment I, it can be seen that the average duration of the disease in the etherized animals is practically the same, while Experiment II, shows the resultant lesions to be about equal in both groups.

CONCLUSIONS

After reviewing the work of others and taking it in conjunction with our own experiments, we feel that the following conclusions are justified:

- 1. Ether anesthesia in tuberculously infected guinea pigs fails to exert any inhibitory action on the progress of the tubercle formation or to prolong the life of the animal.
- 2. Ether anesthesia does not reduce the resistance of tuberculously infected guinea pigs.
- 3. The danger of harming positive sputum cases of pulmonary tuberculosis by causing aspiration of the infected material into non-infected areas, as well as the direct irritating effect of the ether on the inflamed pulmonary tissue, must not be overlooked.

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Medical Economics\*

James A. Duncan, M. D., Toledo

Editors Note.—Dr. Duncan emphasizes two points in medical economics, first the necessity of immediate, accurate entering of charges and second the importance of insisting on doing a cash office-business. Faithfully followed out these two reforms would go far in making the practice of medicine a better business, without in any way robbing it of any of its altruism.

THE oath administered to all physicians 2000 years B. C. carried with it the loftiest conception of the sacredness and beauty of the practice of medicine, and the idea that its ministrations must be made without thought of compensation to the minister. This dominant note has prevailed in all medical teachings to the present date. Ours, indeed, would be a lofty and exceptional profession if we were all so situated that we might practice it without the necessity of receiving compensation.

The physician, however, if he is to live and

\*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery, during the 73d Annual Session of the Ohio State Medical Association, at Columbus, May 7, 1919.



continue to do the good which his profession requires, must constantly bear in mind the compensation he is to receive. Out of my own experience, I want to make, to this section, two suggestions along the line of proper protection to the physician for the services he renders.

#### KEEPING ACCOUNTS

*First:*—It is the almost inevitable fault of every physician to render service, to give advice, to administer medicine, to make calls, and in the press of business, or what is much worse, from a wrong habit which has become second nature, to fail to enter any charge therefor. Every physician should carry with him, just as faithfully as he does his medicine case, his day book for making charges. He should not start out in the morning, upon his round of calls, and trust to memory when he comes back or wait until the retiring hour to enter the charges for the services of the day. He is very apt, when he returns to the office, to find other calls, to find a case which requires immediate and perhaps prolonged attention, upon which he is compelled to center his mental faculties for some length of time, and which, when completed, has driven from his mind many of the charges which he thought he had firmly fixed therein; and they are gone forever. If, with his medicine case, he carries his little day book and at once, when any service has been rendered, enters the proper charge therefor, in black and white, so that there can be no question or mistake, the results, I am sure, will be most satisfying and to some of you, even amazing.

#### THE WASTE IN LOST CHARGES

Within a stone's throw of this meeting-place stands the Capitol of this great State. Its original cost was \$1,300,000.00, and I venture the assertion that the physicians of Ohio waste as much in lost charges in one year as that building cost. The average doctor's remuneration for his labor, his exposure, his loss of sleep, his readiness at all times to respond to every call, night or day, God knows, is little enough, and if that remuneration is materially reduced by his neglect and deficiency, it is well that we have the fact brought to our attention that we may remedy the fault.

#### CASH OFFICE BUSINESS

*Second:*—Every physician should make it the invariable rule that cash be paid for all office business. In hundreds of physician's offices throughout this state, may be seen the familiar sign, "Office Business Cash", and that notice, because of our own neglect and perhaps our own diffidence to live up to it, has become a by-word and a jest. There is no reason whatever why the patient should not understand that when he comes into the doctor's office he must come with the money in his pocket to pay for the service he

receives. It may and will require some education and a little firmness and steadfastness on the part of the physician to enforce this rule, but when once your patients thoroughly understand that that, and that only, is your plan of conducting business, it will be the easiest matter in the world to enforce the rule and reap its benefits. The average charge for office business is not large. It entails as much work to make a charge of \$1.00 for an office consultation as to charge \$5.00 for a visit, or \$100.00 or more for an operation, and it is not fair to the physician and the patient should not ask or require that these smaller items be put through a system of book-keeping. There may be cases where the nature of the service rendered requires a charge of such an amount that it would hardly be fair to ask the patient to pay on the spot, but in that event, if a charge becomes necessary, it should invariably be made before the next patient is permitted to enter the consultation room.

If you carefully follow and act on these suggestions, two results will follow. Your income will be considerably increased, and your patients will learn that you, yourself, have a just appreciation of the value of what you are giving and will respect you and your profession accordingly.

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#### New and Nonofficial Remedies

During May the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Dietetic Cellulose Co. CellufLOUR; Intra Products Co. Ven-Iron Cacodylate, Ven-Iron Cacodylate with Sodium Chloride.

Barbital-Chiris.—A brand of barbital (see New and Nonofficial Remedies, 1920, p. 82) complying with the N. N. R. standards. Antoine Chiris Co., New York.

Barbital Sodium-Chiris.—A brand of barbital sodium (see New and Nonofficial Remedies, 1920, p. 83) complying with the N. N. R. standards. Antoine Chiris Co., New York.

Condensed Vitalate.—A pure culture of *Bacillus bulgaricus*. It is designed for internal administration (see general article, Lactic Acid-Producing Organisms and Preparations, New and Non-official Remedies, 1920, p. 156). The preparation is distributed by the manufacturer only. Vitalate Laboratories of California, Pasadena, Calif. (Jour. A. M. A., April 3, 1920, p. 851).

Elixir Barbital Sodium-Abbott.—Each fluid ounce contains barbital sodium-Abbott (see New and Nonofficial Remedies, 1920, p. 84). 20 grains. Abbott Laboratories, Chicago.

Capsules Corpora Lutea Desiccated-Hollister-Wilson 5 grains.—Each capsule contains desiccated corpus luteum-Hollister-Wilson (see New and Nonofficial Remedies, 1920, p. 204), 5 grains.

# Epidemic of Influenza at the Girls' Industrial Home, Delaware\*

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**Editor's Note.**—There is a Dickensque touch in Dr. Transeau's report: "In the colored girl's cottage the inmate-nurses worked unusually hard. Colored women are born nurses—our two trained nurses were colored women. One colored inmate in particular worked ceaselessly for the patients. Long after she had been sent off duty she would creep back through cold halls to help some patient whose cries she heard. This girl developed pneumonia of a fulminating type and died in the hospital. I inquired the cause of her being sent to a correctional institution and found that she had committed the crime of being an orphan in a county which had no Children's Home to care for her." The profession has rather overlooked the opportunity of using colored women as practical nurses. It may solve some of the problems of securing nursing help routinely as well as in emergency. Dr. Transeau makes some interesting points in her survey. She shows how architects may determine the course of an institution epidemic. She notes that cases run true to form from different infective strains. She also emphasizes that gradual onset and mild fever predicate a moderate course of the disease while abrupt onset with high fever is followed by a severe course, longer illness and complications.

**O**N October 23d, 1918, Dr. Reinert of the Ohio Board of Administration asked the writer to direct the medical work during an epidemic of influenza at the Girls' Industrial Home, Delaware, Ohio. For several weeks previously the girls of the institution had been having *colds* which seemed trivial enough, clearing up after a few days. One girl, however, had a cold, developed pneumonia and died. Then others began to be seriously ill; the disease spread with great rapidity and it was decided that the innocent colds were no less than cases of dreaded influenza.

It must be remembered that in the early days of the epidemic in the United States mild cases were difficult to diagnose. Even in the army camps where bacteriological examinations were made immediately the fact that Pfeiffer's bacilli were expected but were not found, or were present rarely obscured the diagnosis and cases were not properly isolated. The state of affairs at the institution after the first fifty obscure cases developed, made a diagnosis possible.

## SERO-BACTERIN INOCULATION

Dr. Reinert, Dr. Kahle (consultant surgeon to the Ohio Board of Administration) and the writer inoculated 325 of the 450 inmates of the institution with influenza mixed sero-bacterins. Dr. Reinert used influenza mixed sero-bacterins in several of the state institutions.

We inoculated only those girls who were feeling well and who had not had influenza. Within 12 to 24 hours after inoculation the girls reacted to the serum. Usually there was redness and soreness at the point of inoculation, with no symptoms. A few complained of general stiffness and soreness, but none had rise in temperature from the serum.

## A SURVEY OF EXISTING CONDITIONS

Dr. Wilson, resident physician at the institution, and the writer made a survey of conditions under which we would have to work.

There is a well-built 30-bed hospital on the grounds with good sized halls which could be used for wards in an emergency; a good operating room, sterilizing room and dispensary; two good sized wards with adjoining sun-rooms; diet kitchens, etc., and a separate ward for communicable diseases. Under ordinary circumstances the hospital provides ample room for the girls who are ill.

There are 12 cottages in which the inmates live. All new comers are isolated in the receiving cottage for a few weeks before being sent to other cottages. No cases of influenza developed at any time during the epidemic in this receiving cottage.

In the remaining cottages the disease was raging. In two cottages there was over-crowding—the little girls' cottage and the cottage for venereal diseases, where some of the girls were sleeping together on single beds with but a single pillow.

## PLAN OF CAMPAIGN

Our survey showed us that we had 161 cases (not including suspects) scattered in cottages to such an extent that it would be useless to try to separate the girls into sick and well groups. Everyone had been exposed and everyone, with the exception of those who had already had influenza, would doubtless contract the disease.

We decided to clear the hospital of convalescents and cases running uneventful courses and to send to the hospital only the most severe cases, regardless of the rule of cottages or color. Such shifting meant an enormous amount of work for the girls who acted as stretcher bearers, though they cheerfully volunteered their services. We also decided that trained nurses were a necessity and nurses-aids were needed in large numbers, if the hospital and cottages were to receive anything like proper attention.

We appealed to the Red Cross at Columbus who shortly sent us Mrs. Ray, a nurse-organizer. She brought with her two volunteer nurse-aids who had taken courses of lectures. Two were all we

\*From a report to the Ohio Board of Administration.



could secure. They gave valuable assistance. Two trained nurses also arrived and were put on duty at the hospital, where they were assisted by volunteer inmates.

All cottages, with one exception have small single rooms each with an outside window and a transom over the door. In this type of building ventilation is far better than in the wards. *State institutions should provide private rooms for each inmate for the same reasons that they should provide individual towels and drinking cups. Some of the state institutions have a few private rooms for the most difficult disciplinary cases. According to matrons discipline would be far easier if each child had his own room. Objection has been made that behavior would be far worse with the single room plan. A small window in the door of each room will make supervision possible. At any rate, if open wards are supposed to have been policemen of good morals, we can only say that they have been monumental failures.*

In constructing new buildings for institutions where children are to be cared for the state would be saved much lost time, extra work and anxiety, wear and tear on attendants (an item rarely considered) if the buildings were constructed more like hospitals for the treatment of communicable diseases. Unfortunately the state seems to be giving up the small cottage plan of building for the sake of economy—disregarding the high cost of lowering standards.

At the Delaware home the buildings are not model nor up-to-date, almost all need improvements. However, they are cottages not coliseums, and helped in the fight against influenza.

#### UTILITY OF RED CROSS NIGHTINGALES

The Red Cross sent us face masks and much needed warm garments for bed patients. The girls were wearing low-necked and short-sleeved muslin gowns which made fresh air treatment almost prohibitive. After the arrival of the light warm *nightingales* we could have all the fresh air necessary. The air at the farm is pure and dust free, and we might add the spring water is unusually diuretic. The spring made the farm at one time a favorite health resort of the United States.

Pneumonia jackets were also provided—they were wadded and proved cumbersome and uncomfortable so we soon discarded them for the soft *nightingales*.

#### THE PROBLEM OF DIET

The question of diets was a serious one. Prices were high, meat, eggs, and milk were scarce and the cost of fresh fruit seemed prohibitive. The small amount of extra milk we were able to get was sour each morning due to insufficient icing. Fortunately the weather turned colder and we had a little extra milk to give those who most needed it. *The sick girls turned away from their unappetizing diets, craving fresh fruit juices.*

*Many times I have seen an inmate nurse-aid slipping a raw onion to her feverish patient. Onion juice seemed in a way a satisfying substitute for fruit juices. Later on the diets were somewhat improved. Those in the hospital fared a little better than the cottage sick.*

#### DEVOTED AND SELF-SACRIFICING CARE

Our mortality was extremely low in spite of the fact that we had inadequate facilities but we were evidently dealing with an infection of mild toxicity. The devotion of the matrons of the cottages and the cheerful aid the girls gave each other—nursing the sick until they went to bed ill themselves—and the untiring efforts of the resident physician, all helped to save lives.

*In the colored girls' cottage the inmate-nurses worked unusually hard. Colored women are born nurses—our two trained nurses were colored women. One colored inmate in particular worked ceaselessly for the patients. Long after she had been sent off duty she would creep back through cold halls to help some patient whose cries she heard. This girl developed pneumonia of a fulminating type and died in the hospital. I inquired the cause of her being sent to a correctional institution and found that she had committed the crime of being an orphan in a county which had no Children's Home to care for her.*

#### SYSTEMATIZED TREATMENT

In the eleven cottages, each housing 23 to 50 girls with a large proportion acutely ill in bed, it is easily seen that every cottage was a hospital in itself and that each cottage needed a staff as large as the staff which must cover all. As it was, it was impossible to study all cases while the epidemic was at its height.

We established what system we could. Typed slips were given attendants in charge with simple directions for the care of girls complaining or coming down with the disease.

An initial dose of castor oil was given. We gave cathartics freely throughout the course of the disease as constipation was the rule among the inmates, due to their unbalanced diet. Patients were put to bed at once, given a hot drink and sweated. We used spiritus frumenti in hot water in cases in which perspiration was not easily induced.

*A simple cough mixture was given as long as there was any to give. Aspirin and phenacetine were given for pain and restlessness. Hot gargles of normal saline were used freely and were comforting. We used hot camphorated oil liberally; besides any local effect it may have had, it had a beneficial effect on anxious nervous systems. Water carriers made rounds every hour to fill the cups with spring water and to keep the patients reminded of this "medicine." Hot packs, hypodermics and special treatments were given by the trained nurses and physicians. The disinfection of patient's linen was never worked out*

satisfactorily. Some of it was sent directly from bed-side to laundry. The laundresses wore masks and handled the linen as best they could.

*The question came up as to the danger of feeding scraps from trays to the pigs on the farm. The State Board of Health was appealed to and reported no precedent in the matter. We found, however, that the scraps had been fed for two weeks previously and no illness resulted among the animals.*

Second and third inoculations of influenza mixed sero-bacterins were given the girls at 3 and 4 day intervals.

#### STATISTICAL DATA

Up to December 20, 1918, from the total number of girls (450) 72 per cent were definitely diagnosed as having had influenza.

The mortality was 1.2 per cent. The immediate cause of death in three cases was pneumonia, the fourth patient died of acute nephritis. One case of fulminating pneumonia had a heavy rash with cracking and peeling of the skin in large areas. This patient had abscesses of both breasts, which were discharging freely when first observed. They developed in less than twelve hours. From the horribly putrid odor of the breath and sputum we judged the patient was suffering from an abscessed and gangrenous lung, though no autopsy was performed.

Rash occurred in three per cent of the cases. All were desperately ill and one died. The red cases caused us some concern as sore throat was present also, and the eruption resembled scarlet fever in its appearance and distribution. *Three per cent of all patients had relapses and suffered more severely than in the first attack.*

With respect to inoculation the reports indicate that without inoculation 34 per cent of the girls were seriously ill, while of those who were inoculated only 18 per cent presented any serious symptoms whatever. Of the fatal cases three had received no inoculations, the fourth patient had received one inoculation. *Although there is no indication that inoculation acted as a preventive, there seems to be evidence that the subsequent cases were much less severe.*

#### COTTAGE TYPES OF INFECTION

It was evident that different cottages had different types of infection. Each cottage is an entity having its own matron, cook, etc. The chance for contacts between cottages was slight. With

few exceptions the disease ran true to cottage type.

The colored girls were the last to be ill. We hoped they would escape, fearing their susceptibility. Once established in their cottage the disease spread with great rapidity, and pneumonia of the ordinary lobar type predominated. As many as five pneumonia cases were taken to the hospital in a single morning.

In the venereal cottage there were no cases of pneumonia. The infection was characterized by high temperature and bronchitis.

Nearly every patient had severe epistaxis in one cottage. Another cottage had the *bad cold* type, which would ordinarily have been diagnosed as coryza. This cottage complained of lack of medical and nursing attention.

Kidney complications characterized another type. In one cottage we had four cases of suppression lasting many hours with finally a small flow of bloody urine. One of these patients had a temperature of 106°F.

Laryngitis with marked hoarseness and in a few cases loss of voice characterized one cottage. A few cases of earache occurred in eight out of 11 cottages; it was neuralgic, there were no cases of purulent otitis media.

Patients were delirious in three cottages only, the condition seemed unrelated to high temperatures—perhaps related more directly to unstable nervous systems.

In some cottages the onset of the disease was gradual with coryza, injected conjunctivae, and mild headache, the patient complaining but objecting to going to bed. In other cottages the onset was sudden with severe toxic symptoms, high fever and great prostration. Some showed severe respiratory symptoms at the onset—high temperature, with painful unproductive cough.

For convenience in study we classified the types as mild and severe toxic and mild and severe respiratory.

#### GUAGING SEVERITY OF TYPE BY ONSET SYMPTOMS

In 70 per cent of the cases the onset was gradual and of these about half were mild toxic and half were mild respiratory. In the remaining 30 per cent the onset was sudden, and of these a third showed severe toxic symptoms, two-thirds severe respiratory.

We were particularly interested in the frequency of symptoms predominating at the onset in their relation to the severity of the subsequent illness and the length of illness as illustrated in the following table:



Frequency of symptoms predominating at onset:	Serious Illness	Length of Illness Days
1. Mild fever ..... (±70%) of cases	followed by serious illness in	0% (3)-5-7
2. High fever ..... (±30%) of cases	followed by serious illness in	80% 7-14
3. Sneezing, sore throat, injected conjunctivae..... of cases	followed by serious illness in	9% (2)-5-(9)
4. Unproductive cough ..... 19% of cases	followed by serious illness in	91% (5)-7-14-(21)
5. Hemorrhage ..... 8% of cases	followed by serious illness in	61% (4)-7-14-(35)
6. Vomiting for two days..... 7% of cases	followed by serious illness in	36% 7-14-(18)
7. Vomiting for one day..... 6% of cases	followed by serious illness in	27% (3)-7-14
8. Earache ..... 5% of cases	followed by serious illness in	12% (3)-7-9
9. Rash ..... 3% of cases	followed by serious illness in	100% 7-18
10. Suppressed urine ..... 2% of cases	followed by serious illness in	100% 14-21

## SUMMARY

*To summarize the survey briefly:*

1. Architects may determine the course of an institution epidemic.

2. The types of influenza in the different cottages of the Girls' Industrial Home at Delaware,

Ohio, were caused apparently by different strains of the infecting agent.

3. Gradual onset with mild fever was followed by a moderate course of the disease and shorter illness.

4. Abrupt onset with high fever was followed by a severe course, longer illness and complica-

## Syphilis and Feeble-mindedness in the Alabama State Industrial Schools\*

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W. D. Partlow, M. D., Tuscaloosa, Alabama,

Superintendent Alabama Insane Hospitals.

Editor's Note.—From this survey made by Drs. Haines and Partlow it is very apparent that there are a great many boys and girls in industrial schools who should not be there. It is a waste of public money to detain feeble-minded boys and girls in such institutions. They are so generally defective in intelligence and learning that they are unable to develop self-control and industrial efficiency of the sort and to the extent demanded of citizens in democratic society. In handling this problem Drs. Haines and Partlow also point out that dullards must not be confused with feeble-minded, as they can and do manage for themselves prudently and become useful members of society. Dullards represent a large proportion of run-aways and truants who are sent to industrial schools for correction. The public schools, if properly organized would prevent the delinquencies of these dullards, and would thus conserve citizenship and also save the expense of misdirected rehabilitation. This is work for the psychiatrist. The main point developed in this survey is that not any one physical cause of mental defectiveness prevails, but that mentally inferior are invariably the physically inferior.

THE State of Alabama has four Industrial Schools, two small schools for white girls, in and near Birmingham, with a total population of about 75, the Alabama Boys' Industrial School at East Lake, near Birmingham, for white boys, with a population of a little over 300, and the State Reform School for Juvenile Negro Law-Breakers at Mt. Meigs, with a population of 280. The boys and girls were rated first as to intelligence by means of group intelligence tests some-

what similar to those used by the division of psychology of the surgeon general's office. Children graded in schools were given two sorts of tests, according to grade. Those of the fourth grade and above were given a test very much like the so-called Alpha tests of the army. Children of the third grade and below were given a test consisting of five parts, four of which required no reading knowledge of English whatever. After these examination records had been scored, all boys and girls making such low scores as to lead us to suspect they might be mental defectives were subsequently given individual mental examinations. The Stanford revision of the Binet-Simon tests was used for this work.

By the kind co-operation of Dr. J. B. Dowling, county health officer for Jefferson County, Alabama, serum specimens of the 103 boys at the Boys' Industrial School, whom we gave individual

\*Alabama has no state institution for the care and segregation of feeble-minded persons. The survey herewith reported constitutes part of a plan for the more effective administration of public funds. It was undertaken at the request of Mr. W. D. Nesbitt, Chairman of the newly organized Board of Control and Economy, forwarded to us by the State Health officer of Alabama, Dr. S. W. Welch. The work was done in April and May, 1919.

The National Committee for Mental Hygiene financed the work. The Alabama State Board of Health paid the traveling expenses of one of the authors and the Alabama Board of Control and Economy and the Board of Trustees of the State Reform School for Juvenile Negro Law-Breakers also furnished some of our transportation.

TABLE I.

	Total population rated by Haines' group tests.	Numbers rated and diagnosed by Stanford Binet tests.	Numbers diagnosed Feeble-minded	Numbers provisionally rated Border-line.	Numbers diagnosed Constitutional Inferiors or Psychopaths.
Alabama Boys' Industrial School, East Lake.....	313	103	44	12	4
State Training School for Girls, Birmingham.....	46	19	11	3	3
Mercy Home Industrial School for Negro Girls, B'm'hm....	30	10	4	2	2
State Reform School for Juvenile Negro Law Breakers, Mt. Meigs .....	283	147	59	46	9
<b>Total .....</b>	<b>672</b>	<b>279</b>	<b>118</b>	<b>63</b>	<b>18</b>

mental examinations, were examined for the Wassermann reaction. By similar co-operation of the State Department of Health, Dr. P. P. Salter of the Board of Health Laboratory at Montgomery, examined in the same way the serum specimens of the 147 boys of the State Reform School for Juvenile Negro Law Breakers to whom we gave individual mental examinations. We are also able to report physical examinations of these same 147 boys, through the effective and courteous service rendered by Dr. Julius W. McCall.

#### TABULATED RESULTS OF INTELLIGENCE TESTS

Table I, shows the total population of the four schools rated in intelligence by the Haines' group tests; numbers examined individually and diagnosed by the Stanford Binet-Simon tests; and, numbers found feeble-minded (cases needing lifelong custody for the safety of society), borderline and constitutionally inferior persons and psychopathic personalities.

The percentages of boys and girls found feeble-minded in the four schools in order presented in the table are respectively, 14.0, 23.9, 13.3, and 20.8. The whole number found feeble-minded in the four schools, 118, constitutes 17.5 per cent of the aggregate populations.

Considering half the border-line cases as likely to prove feeble-minded, and adding these and the constitutional inferiors and psychopaths, to the feeble-minded we find 167, or about 25 per cent. of these 672 boys and girls who cannot be trained so as to become suitable cases for parole. These boys and girls should not, therefore, be in any industrial school. It is an inappropriate application of public money to detain them in these institutions.

#### TRUANTS AND DULLARDS

It is well known that such populations as these number among them many truants and runaways from homes, orphanages and other institutions. They have proved themselves misfits in homes and in schools. They are not interested

in schools as ordinarily organized. In the cases of the 118 whom we adjudge feeble-minded, the explanation is obvious. Of the 63 whom we report as borderline cases, the matter is left in doubt in our minds as to whether these belong with the feeble-minded, or whether they are of the class of dullards to which we turn forthwith. *The feeble-minded are so generally defective in intelligence and learning capacity that they are unable to develop self-control and industrial efficiency of the sort, and to the extent, demanded of citizens in democratic society.*

*Dullards, on the other hand, while they are like the feeble-minded in their inability to progress in the formal arts of education as presented in our school curricula, and are rated as stupid by teachers, are yet possessed of capacity for self-control and industrial production which place them in an entirely different class, when we consider them from the social point of view, and this is the point of view from which feeble-mindedness is judged. Feeble-mindedness is a social category. The dullards are not feeble-minded because they can, and do, manage for themselves prudently and constitute useful members of society.*

*Dullards lack the kind of imagination which is necessary to grasp the meanings of the symbols of written language, or arithmetic, or both. We have such exceptional children in every public school. In industrial schools, of the sort under consideration here, they naturally accumulate in larger numbers. Naturally, because it is logical for them to rebel against the repeated attempts made in our regular schools to teach them things for which their imaginations are not equipped. This logical rebellion naturally leads them to the industrial school. If the industrial school is intended to be a kind of superior public school, dealing with exceptional cases for the training of which the public schools are not equipped, then it is logical that these dullards should be gathered in large numbers at these schools. The public school if properly organized would prevent the delinquencies of the boys and girls who are dull,*



and would thus conserve citizenship and also save expense of this attempted rehabilitation.

It is a most important function of the psychiatrist called in for examinational and prognostic work in schools, courts, or industrial schools, to clearly distinguish between the *feeble-minded*,—so defective mentally that they can never manage themselves or their affairs with prudence, and the *dullards* who are short in some of the reaches of their imaginative faculties, but who have capacity for citizenship, and who need not, therefore, be institutionalized either for the safety of themselves, or for that of society.

Throughout this work we have held clearly in our minds this distinction. Feeble-mindedness for us means an *incapacity for self direction* of such a degree that it endangers the safety and the happiness, either of the individual himself, or of others. Such cases as these demand state custody, because they are children in mind. Only in cases where the social environment is such that they can and will always receive care ap-

of these had been adjudged feeble-minded, and the other a constitutional inferior of criminal type. Every one of the remaining cases was negative in the Wassermann reaction.

Of the 147 negro boys, 31 gave positive Wassermann reactions in the serum of the blood; 56 showed enlarged lymph glands; 56 showed tonsils enlarged and infected; 33 had adenoids; 4 had Hutchinson teeth; 1 exhibited exaggerated patellar reflexes; 2 exhibited sluggish pupillary reactions to light; 9 had organic heart murmurs; 18 were cases suspicious of pulmonary tuberculosis, and 14 showed evidence of scabies infection.

Table II, represents these facts, together with an analysis of these cases distributed according to the mental diagnosis. For instance, among the 59 of these 147 boys found to be feeble-minded are 13 of the 31 positive Wassermanns and 2 of the 4 cases of Hutchinson teeth.

From this table it is readily seen that the incidence of syphilis as judged by positive Wassermanns is not so great amongst those judged fee-

RELATIONS OF PRINCIPAL PHYSICAL ABNORMALITIES TO MENTAL CONDITIONS IN ALABAMA REFORM SCHOOL FOR JUVENILE NEGRO LAW BREAKERS

TABLE II.

	Results of Individual Mental Examinations.	Positive Wassermanns found (serum).	Hutchinson Teeth	Organic Heart Murmurs.	Tonsils Enlarged and Infected.	Lymph Glands Enlarged.	Adenoids	Suspicious of Pulmonary Tuberculosis.	Scabies Infection
Total number of cases found among 147 boys examined .....	147	31	4	9	56	56	33	18	14
Numbers of Feeble-minded.....	59	13	2	2	23	21	10	5	7
Numbers of Borderline .....	46	3	1	3	10	13	6	5	2
Numbers of Constitutional Inferiors.....	8	2	0	1	3	2	2	0	1

propriate to children can they safely be allowed at large.

Dullards, on the other hand, are very useful in the community. They are productive as laborers, small tradesmen, and farmers. Clinical psychiatry goes wide of the mark and stultifies its own efforts when dullards are classed as feeble-minded simply because of some technical failure in some so-called intelligence test.

#### THE INCIDENCE OF SYPHILIS

The Wassermann reactions of the boys of the two schools, and the physical examinations of the negro boys, afford a means of observing the incidence of syphilis among the feeble-minded, and the relations of other physical abnormalities to mental deficiency.

Among the 103 cases examined at the Boys' Industrial School only one positive Wassermann was found, and this in a boy whose intelligence had been rated as of borderline quality. Two boys gave Cholesterin positive reactions. One

ble-minded as amongst those who are adjudged to be of normal intelligence. Thirteen of the 59 feeble-minded exhibiting positive Wassermanns constitute but 22 per cent of that number, whereas the 13 positive Wassermanns found amongst the 34 cases of the 147 boys who are not feeble-minded, are not of borderline intelligence, and are not constitutional inferiors, constitute 38.2 per cent of that number who are suspected of syphilitic infection because of positive Wassermann reaction obtained in examining their blood serums.

The anomalies of reflexes are exceedingly sparse. The one case exhibiting exaggerated patellar reflexes gives a negative Wasserman reaction in the serum, has normal pupillary reactions to light, and is adjudged feeble-minded, being 16 years of age, and having an intelligence quotient of .55. In the two boys reported as exhibiting sluggish pupillary reactions to light, all other reflexes are reported as normal in both. Both these boys give positive Wassermann re-

actions in the serum. One of them is feeble-minded and one is of normal intelligence.

*In fact, it would be as easy to prove, so far as these figures go, an etiological relationship between scabetic infection and feeble-mindedness, as between syphilitic infection, as shown by the positive Wassermann of the blood, and feeble-mindedness. The infection of tonsils, taking these figures alone as our guide, might seem to be a real factor in cases of poor mental endowment.*

On the other hand, organic heart cases, and cases suspicious of pulmonary tuberculosis, are sparsely represented amongst the mentally inferior. *But the main point exhibited by the analysis of these anomalies is not any one physical cause of mental defect, but the fact that the mentally inferior are likewise physically inferior.* This is not shown so plainly by this table as by the presentation, side by side, of all the findings in individual cases. This constitutes entirely too much detail to present here, but an examination of this detail will convince anyone that there are very few feeble-minded who have not some physical anomaly, and large numbers of them are very poor physical specimens.

#### SUMMARY

(1) Of 672 white girls, white boys and negro boys in Alabama Industrial Schools, 118 are feeble-minded. These are institutional cases, needing life-long care to prevent crime, immorality and propagation of their kind.

(2) Sixty-three others are adjudged as having borderline intelligence. Many of these may turn out to be institutional cases.

(3) Eighteen others are found to be constitutional inferiors or psychopaths, and therefore in need of custody, or medical treatment, and not reformable.

(4) About 25 per cent of these populations is, therefore, improperly placed in these educational and reformatory institutions. It is not likely they can be educated or rehabilitated socially on account of mental condition.

(5) Of the serum specimens from 103 white boys, only one yielded a positive Wassermann and two Cholesterin positives.

(6) Of 147 serum specimens from negro boys, 31 yielded positive Wassermans; 13 of these were of the 59 adjudged feeble-minded 3 of the 46 adjudged borderline; 2 of the 8 constitutional inferiors; leaving 13 positive Wassermans amongst the 34 judged as of normal mentality after individual mental examinations. This gives us no evidence of a high rate of incidence of syphilis amongst the mentally inferior.

(7) Hutchinson teeth as a sign of congenital syphilis are very rare among these boys.

(8) Anomalies of reflexes, such as commonly indicate syphilitic invasion of the nervous system, are still rarer; only 3 cases reported, 2 of these feeble-minded.

ROOM 302 THE NEW CAPITOL.

## OHIO PUBLIC HEALTH NOTES

Results of the spring clean-up campaign in 170 Ohio towns were elimination of 3,023 fire hazards and 4,779 menaces to health, according to State Fire Marshall W. J. Leonard. The campaigns began April 1 and terminated during June. In 104 of the 170 towns from which reports have been tabulated, the number of fires has been reduced, owing to the clean-up activity, and in 115 the health of the communities shows improvement. Permanent results were obtained in 129 of the towns, and in the same number fire prevention education is reaching into homes.

—Cleveland's automobile truck infant clinic, known as the "Babies' Special", started on a tour of the county June 1. One or two clinics are being held by Dr. J. E. McClelland in each of the following towns: Chagrin Falls, Bedford, Brecksville, Berea, Olmstead Falls, North Olmstead, Dover Center and Strongsville.

—Montgomery County Health Board has asked the county advisory health council for \$15,000 with which to carry on its work during the year 1921. This is an increase of \$3,000 over the

amount appropriated for the work of the board during 1920.

—"If you want long life and good health—be mayor of Cambridge" is the slogan of residents of that city. Cambridge has the unusual distinction of having ten former mayors, all of whom have served as chief executive of the city in successive terms since 1887 until the present time, living and enjoying excellent health.

—Akron City Health Department favors the compulsory vaccination of all unvaccinated school children, beginning next fall. It is said that during the winter 10,000 vaccination notices were sent home with unvaccinated children by the health department, and nearly the entire number went unheeded by parents.

—A drive on rats and mice started in Columbus in June and will continue until July 15. The anti-rodent campaign is being supervised by J. L. Nichols of the biological division, federal department of agriculture, who has successfully waged similar campaigns in 12 other states. The city health board's office is headquarters for the campaign which is being assisted by the Chamber of Commerce, civic organizations, school children and Boy Scouts.

—Miss Ruth E. Young of Canton has been appointed supervising nurse of the public health nursing division of the Canton health department.





CHARLES LUKENS, M. D., of Toledo

President of The Ohio State Medical Association for the year  
1920-21, who assumed his office at the close of the  
Seventy-fourth Annual Session at Toledo.



## Progress, Profit and Pleasure---Three High Lights in Harmonious and Successful Annual Meeting of Your Association

Hats off to Toledo! She did herself proud in entertaining the State Association on June 1, 2 and 3. The seventy-fourth annual meeting is unanimously conceded to have been one of the most successful ever held by the Association. It was marked by unprecedented harmony within the ranks, enthusiasm in organization work, interest in medical education, and desire for unselfish service to the public.

The total registration numbered 1062, including members of the Association, medical guests, non-medical guests and exhibitors. This figure represents a slight reduction from the registration in Columbus in 1919, when 1173 members and medical guests registered, exclusive of non-medical guests and exhibitors, but the deficit in attendance was more than offset by the warm spirit of friendliness, enthusiasm and cooperation which permeated the meeting.

The reduction in attendance was largely attributable to the fact that the 1920 annual meeting of the American Medical Association was held in advance of the Ohio meeting; that the convention of the American Medico-Psychological Association was in process in Cleveland at the same time, attracting nearly all state hospital physicians and a large proportion of those who annually attend the sessions of the Section on Nervous and Mental Diseases, and finally to the fact that Toledo is not as readily accessible to the south and southeastern sections of the state as other large cities which have entertained the Association.

Registration started with a boom early Tuesday morning and by the time for the convening of the opening session at 10 o'clock, a good sized crowd had assembled. The call to order by President Baldwin was followed by addresses of welcome by Mayor Schreiber of Toledo, and Dr. E. W. Doherty, president of the Toledo and Lucas County Academy of Medicine, and the annual address of the president.

Under the guidance of President Baldwin, the House of Delegates dispatched its business with an alacrity and decisiveness which would have met the approval of the author of "Robert's Rules of Order." In accordance with the provisions of the new constitution, adopted in 1919, the evening session of the House of Delegates was dispensed with and only two sessions were held, these being on Tuesday morning and Wednesday afternoon. Reports of officers and committees were heard at the first session, and election of officers, handling of resolutions and selection of Columbus for the 1921 meeting occupied the second.

Instead of the customary smoker, the first evening of the convention was featured by a conference on social and economic problems which drew

an audience that filled to capacity the large auditorium of the Y. M. C. A. A discussion of compulsory state health insurance, lead by Dr. Frederick R. Green of Chicago, secretary of the Council on Health and Public Instruction of the American Medical Association, and Dr. Walter

### Officers 1920-21

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President-Emeritus, J. C. Reeve, Sr., M. D.	Dayton
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### COMMITTEE ON MEDICAL ECONOMICS

H. L. Sanford, M. D.....	Cleveland
Webster Smith, M. D.....	Dayton
Jacob Hyman, M. D.....	Logan

H. Snyder of Toledo, a member of the special committee on health insurance of the State Association, was of unusual interest, the presentations of the problem by Drs. Green and Snyder being declared by students of the subject in attendance to be the best they ever had heard.

Tuesday afternoon and Wednesday morning were devoted to meetings of the Sections on Sur-



gery; Medicine; Obstetrics and Pediatrics; Eye, Ear, Nose and Throat; Dermatology, Proctology and G. U. Surgery; Hygiene and Sanitary Science, and Nervous and Mental Diseases. Without exception the section meetings were well attended and there was generous praise for the excellence of the programs.

At the second general session held on Wednesday afternoon the annual orations were delivered by Dr. Lewellys Barker, professor of Clinical Medicine, Johns Hopkins University, Baltimore, Md., and Dr. Hugh Cabot of the University of Michigan, Ann Arbor. Dr. Barker's subject was "High Blood Pressure, Its Causes and Management," and Dr. Cabot's was "Non-Tubercular Infections of the Kidney."

On Tuesday and Wednesday noons the Committee on Public Policy and Legislation and the One Hundred Per Cent. Club held their annual luncheons, which were attended, respectively, by the county auxiliary legislative committeemen and the officers of the societies which have attained one hundred per cent. memberships during the present year.

The annual banquet, on Wednesday evening, held in the spacious new LaSalle and Koch Building, was a thoroughly enjoyable affair. Dr. Charles Lukens of Toledo, the newly installed president, presided as toastmaster. After dinner speakers were Edgar A. Guest of Detroit, and Bishop Joseph Schrembs of Toledo. Mr. Guest, who is a poet and humorist of national fame, lived up to his reputation. In a speech in which he frequently referred to a volume of poems written by himself entitled "Heap O' Livin'" he alternately convulsed his audience with laughter and tears. "When Father Shakes the Stove" was one of the poems that made a big hit with the banqueters. In striking contrast to Mr. Guest's humorisms was the address of Bishop Schrembs on "The World and Its Literature," in which he declared that it is not wholly association with living men and women that goes to make up character, but the companionship of characters pictured in the literature of the world. "Old Ramases had the right idea when he built that famous library centuries ago in Alexandria and called it the hospital of the soul," said Bishop Schrembs.

Under the chairmanship of Mrs. Charles Lukens, wife of the new president, the lady visitors were cordially entertained during the Toledo sessions. Their entertainment included a motor trip through the Maumee Valley and tea at the Country Club on Tuesday afternoon, and luncheon at the Toledo Yacht Club and a boat ride up the river on Wednesday afternoon.

The closing feature of the program was a joint session of the Medical and Surgical Sections on Thursday morning. The program for this session was a symposium on "Exophthalmic Goitre" presented by Drs. George W. Crile, C. F. Hoover and David Marine of Cleveland, and Dr. Andre

Crotti of Columbus. The discussion was led by Dr. Lewellys Barker of Baltimore, Md., one of the annual orators, and Dr. Harry S. Noble of St. Marys.

#### REGISTRATION FOR 1920 MEETING

We present herewith the "Who's Who" list, meaning those who registered at the Toledo meeting. With a few exceptions every county in the state is represented in the following registration of members and medical guests, numbering 877. Non-medical guests and exhibitors at the meeting totaled 185, bringing the total number to 1062.

##### ADAMS

*Members*—A. R. Carrigan, O. B. Kirkpatrick, O. T. Sproull, Titus Stevenson.

##### ALLEN

*Members*—H. L. Basinger, Fred L. Bates, W. W. Beauchamp, G. R. Clayton, Emma Ernsberger, Albert H. Herr, Alan D. Knisely, D. T. McGriff, John J. Murphy, Mabel Dunn Murphy, W. L. Neville, K. L. Parent, William Roush, A. S. Rudy, A. V. Sibert, Charles Smith, M. D. Soash, O. S. Steiner, F. G. Stueber, P. J. Stueber, John J. Sutter, T. R. Thomas, M. A. Wagner.

*Guest*—E. H. Hedges.

##### ASHLAND

*Members*—G. B. Fuller, G. W. Jacoby.

##### ASHTABULA

*Members*—C. E. Case, W. H. Leet, G. T. Wasson.

##### ATHENS

*Members*—D. H. Biddle, J. L. Henry, C. S. McDougall, W. D. Porterfield, E. I. Stanley, J. F. Weber.

##### AUGLAIZE

*Members*—E. F. Heffner, R. C. Hunter, G. L. Lyne, H. S. Noble, N. V. Noble.

##### BELMONT

*Members*—A. W. Diven, J. L. Hervey, J. O. Howells, C. W. Kirkland, C. W. Lose, J. S. McClellan, D. M. Murphy, F. S. Wright.

##### BROWN

*Members*—A. W. Francis, J. W. Kautz, J. M. Smith.

##### BUTLER

*Members*—R. Harvey Cook, F. M. Fitton, G. D. Lummis, Mark Millikin, Henrietta Puthoff-Miller.

##### CARROLL

*Guest*—J. J. Hathaway.

##### CHAMPAIGN

*Member*—D. C. Houser.

##### CLARK

*Members*—P. E. Cromer, J. J. Moore.  
*Guest*—George V. Sheridan.

##### CLERMONT

*Member*—F. H. Lever.

## CLINTON

*Members*—C. E. Briggs, Kelley Hale, C. A. Tribbet.

## COLUMBIANA

*Members*—L. F. Derfus, Stanton Heck, F. T. Miles, A. W. Schiller, R. E. Smucker, E. M. Wilson, H. K. Yaggi.

## COSHOCOTON

*Members*—B. O. Burkey, E. C. Carr.

## CRAWFORD

*Members*—W. G. Carlisle, E. D. Helfrich, Mart L. Helfrich, C. E. Kimerline, C. A. Lingenfelter, C. D. Morgan, C. A. Ulmer, H. L. Van Natta, W. L. Yeomans.

## CUYAHOGA

*Members*—George I. Bauman, R. J. Beels, R. P. Bell, H. A. Berkes, A. H. Bill, R. H. Birge, C. A. Black, M. E. Blahd, A. D. Campbell, H. N. Cole, G. W. Crile, C. L. Cummer, H. S. Davis, S. Englander, Desider Folds, G. E. Follansbee, W. D. Fullerton, C. L. Graber, C. A. Hall, E. S. Hannum, E. H. Harsh, H. J. Hartzell, C. H. Hay, C. T. Hemmings, F. L. Herrick, C. F. Hoover, J. M. Ingersoll, W. J. Irwin, T. S. Jackson, N. M. Jones, F. J. Kern, H. C. King, E. Klaus, A. G. Knost, J. J. Kurlander, F. G. Leonard, S. C. Lind, W. E. Lower, David Marine, Myron Metzenbaum, J. M. Moore, Roger G. Perkins, W. J. Manning, C. L. McDonald, D. A. Prendergast, W. J. Quigley, H. L. Rockwood, V. C. Rowland, B. E. Sager, H. L. Sanford, O. M. Shirey, H. G. Sloan, B. W. Spero, J. E. Tuckerman, W. C. Tuckerman, W. H. Tuckerman, R. K. Updegraff, Eugene Warren, T. C. Young.

*Guests*—A. J. Lanzer, E. P. Neary.

## DARKE

*Members*—G. W. Burnett, J. E. Hunter, M. C. Hunter, B. F. Metcalfe, J. E. Monger, J. C. Poling, A. F. Sarver.

*Guest*—Guy E. G. Byers.

## DEFIANCE

*Members*—G. W. Huffman, M. R. Kittredge, J. J. Reynolds, G. E. Winn.

*Guest*—T. C. Cameron.

## DELAWARE

*Members*—G. E. Cowles, M. W. Davies.

## ERIE

*Members*—Smith Gorsuch, Charles Graefe, J.

T. Haynes, F. M. Houghtaling, F. F. Lehman, M. J. Love, H. D. Peterson, Wm. Storey, G. F. Thompson.

## FAIRFIELD

*Members*—H. F. Bigony, H. M. Hazelton, W. B. Taylor.

## FAYETTE

*Members*—J. M. Boyd, A. O. Ervin, L. P. Howell, D. H. Rowe, H. L. Stitt.

## FRANKLIN

*Members*—J. B. Alcorn, Hugh A. Baldwin, J. F. Baldwin, A. S. Barnes, L. L. Bigelow, H. B. Blakey, F. G. Boudreau, John E. Brown, E. H. Chapin, J. J. Coons, Andre Crotti, W. C. Davis, W. D. Deuschle, V. A. Dodd, J. D. Dunham, T. A. Evans, Fred Fletcher, T. R. Fletcher, A. W. Freeman, W. N. Gilmore, S. J. Goodman, F. C. Haney, G. T. Harding, Jr., A. M. Hauer, E. R. Hayhurst, J. E. Holmes, C. D. Hoy, W. D. Inglis, G. W. Keil, B. R. Kirkendall, O. M. Kramer, F. F. Lawrence, R. G. Leland, E. F. McCampbell, M. D. McCutcheon, J. R. McDowell, C. W. McGavran, C. S. Means, L. W. Neiswender, W. A. Noble, H. M. Platter, C. D. Postle, C. O. Probst, A. W. Prout, R. A. Ramsey, Edward Reinert, Andrews Rogers, D. G. Sanor, Ernest Scott, A. H. Seeds, C. J. Shepard, W. P. Smith, C. L. Spohr, E. B. Starr, A. M. Steinfeld, Wells Teachnor, J. H. J. Upham, C. M. Valentine, F. C. Wagenhals, Frank Warner, F. O. Williams, T. R. Williams, A. C. Wolfe, E. C. Wood, C. H. Wyker.

*Guest*—W. H. Dittoe.

## FULTON

*Members*—P. S. Bishop, Thomas Blair, H. E. Brailley, L. C. Cosgrove, W. P. V. Evers, H. Hefron, P. J. Lenhart, W. H. Maddox, George McGuffin, Jay H. Miller, C. F. Murbach, E. A. Murbach, R. W. Reynolds, G. R. Salsberry, A. M. Wilkins.

## GALLIA

*Member*—Mary L. Austin.

## GEAUGA

*Member*—J. A. Heeley.

## GREENE

*Members*—W. H. Finley, R. H. Grube, J. C. Lackey, Reed Madden, Ben R. McClellan, C. G. McPherson, R. R. Richison, L. L. Taylor.

## Delegates to American Medical Association, 1921-22

## DELEGATES

J. H. J. Upham, M. D. .... Columbus  
Ben R. McClellan, M. D. .... Xenia  
C. D. Selby, M. D. .... Toledo  
G. E. Follansbee, M. D. .... Cleveland  
Granville Warburton, M. D. .... Zanesville  
W. D. Haines, M. D. .... Cincinnati

## ALTERNATES

D. H. Morgan, M. D. .... Akron  
L. D. Allard, M. D. .... Portsmouth  
R. C. M. Lewis, M. D. .... Marion  
H. M. Platter, M. D. .... Columbus  
C. L. Minor, M. D. .... Springfield  
Dudley Palmer, M. D. .... Cincinnati



## GUERNSEY

*Members*—A. B. Headley, F. M. Mitchell.

## HAMILTON

*Members*—D. H. Abbott, C. C. Agin, C. L. Bonifield, F. J. Boyd, W. L. Brodberger, C. J. Broeman, F. M. Burns, Robert Carothers, M. H. Fischer, A. H. Freiberg, R. E. Gaston, Otto P. Geier, William Gillespie, S. J. Goldberg, W. D. Haines, R. B. Hall, D. C. Handley, R. C. Heflebower, W. C. Herman, H. H. Hoppe, Robert Ingram, Edwin Khuon, A. L. Knight, G. F. McKim, F. H. McMechan, J. D. Miller, J. W. Miller, E. W. Mitchell, Walter E. Murphy, C. A. Neal, S. F. Oliver, D. W. Palmer, W. H. Peters, J. E. Pirrung, Joseph Ransohoff, Augustus Ravogli, Louis Schwab, O. J. Seibert, G. O. Sikes, E. O. Smith, C. T. Souther, Magnus A. Tate, J. A. Thompson, M. H. Urner, D. T. Vail.

*Guest*—Henry Ladd Stickney

## HANCOCK

*Members*—J. W. H. Beach, J. P. Baker, M. A. Darbyshire, J. V. Hartman, A. E. King, R. N. Lee, O. H. Saunders, E. B. Taylor, E. J. Thomas, C. D. Todd, J. C. Tritch, R. W. Whisler, L. S. Woods, W. J. Zopfi.

*Guest*—Amos Beardsley.

## HARDIN

*Members*—C. R. Blosser, D. H. Bowman, C. D. McCoy, A. S. McKittrick, C. C. McLaughlin, D. P. Phillips, E. S. Protzman, W. H. Rabberman, R. G. Schutte, A. A. Tombaugh, O. H. Tudor, G. S. Wilcox, H. R. Wynn.

## HARRISON

*Member*—H. G. Bonnell.

## HENRY

*Members*—J. L. Brubaker, C. E. Burgett, R. L. Davis, J. F. Earp, J. H. Fiser, C. M. Harrison, A. G. Hissong, Charles Mowry, H. F. Rohrs, C. H. Skeen, J. H. Smith.

*Guest*—J. R. Bolles.

## HIGHLAND

*Members*—O. R. Eylar, R. E. Holmes, H. H. Lowe, Lockhart Nelson.

## HOCKING

*Member*—M. H. Cherrington.

## HOLMES

*Members*—A. T. Cole, J. C. Elder.

## HURON

*Members*—H. R. Dewey, M. L. Hindley, M. W. Jacoby, F. M. Kent, W. W. Lawrence, W. C. Martin, H. M. Metcalf.

## JACKSON

*Member*—C. A. Scurlock.

## JEFFERSON

*Members*—J. R. Caldwell, C. E. Gourley, G. T. Gourley, F. H. Riney.

## KNOX

*Members*—C. D. Conard, S. A. Douglass, V. L. Fisher, F. C. Larimore, J. F. Lee, J. D. Thomas.

## LAKE

*Members*—E. S. Jones, Van N. Marsh, H. N. Trumbull.

## LAWRENCE

*Member*—W. F. Marting.

## LICKING

*Members*—H. B. Anderson, W. E. Boyer, C. F. Legge, W. R. Morgan.

## LOGAN

*Members*—R. H. Butler, J. P. Harbert, W. C. Pay.

## LORAIN

*Members*—William Baldwin, S. V. Burley, E. P. Clement, W. F. Dager, C. H. Frederick, B. E. Garver, C. W. Garver, W. E. Hart, W. B. Hubbell, W. H. Hull, R. A. Pease, E. F. Smith.

## LUCAS

*Members*—M. B. Ajemian, W. W. Alderdyce, F. W. Alter, S. B. Andrews, K. C. Becker, H. K. Beckwith, H. A. Bennett, C. A. Berger, J. M. Bessey, P. J. Bidwell, R. L. Bidwell, H. J. Bollinger, Wm. Bonser, R. B. Bowen, D. E. Bowman, W. W. Brand, L. A. Brewer, O. S. Brigham, B. B. Brim, P. B. Brockway, F. Broughton, N. W. Brown, Rolph Brown, T. E. Burgess, W. T. Burke, C. A. Burritt, A. E. Canfield, G. L. Chapman, B. G. Chollett, H. S. Cohn, C. B. Cole, J. A. Coleman, S. J. Coulter, W. J. Coulter, T. M. Crinnion, R. B. Curl, R. P. Daniels, J. R. Davis, D. D. Dellzell, I. O. Denman, W. G. Dice, M. W. Diethelm, C. M. Diebert, A. J. Dauer, E. W. Doherty, L. M. Dolloway, J. M. Donnelly, F. M. Douglass, C. C. Dreyer, J. A. Duncan, G. W. Dunlap, L. R. Effler, J. D. Ely, F. L. Eyestone, O. P. Feinberg, F. B. Ficklin, K. D. Figley, S. D. Foster, J. M. Frick, E. G. Galbraith, John Gardiner, William Gardiner, G. E. Garwood, S. D. Griffen, E. B. Gillette, N. W. Gillette, W. J. Gillette, L. C. Grosh, A. B. Gruver, V. B. Halbert, G. T. Hannah, C. M. Harpster, W. H. Hartung, Oscar Hasencamp, H. S. Hayford, H. H. Heath, T. F. Heatley, B. J. Hein, T. F. Higgins, S. S. Hindman, B. K. Hobart, Paul Hohly, P. M. Holmes, I. E. Hunter, J. W. Hull, C. O. Imoberstag, Grace Jones, G. H. Jones, Dalton Kahn, J. G. Keller, L. E. Kerr, F. L. Klopfenstein, Otto Landman, E. M. Latham, J. T. Lawless, Sr., B. E. Leatherman, F. A. Leslie, L. A. Levison, Charles Louy, Charles Lukens, M. L. Marks, L. K. Maxwell, W. F. Maxwell, E. R. Mellott, J. B. Metzger, C. H. Miller, L. A. Miller, J. L. Moore, C. W. Moots, F. W. Morley, J. A. Muenzer, O. K. Muhme, C. S. Mundy, J. L. Murray, Foster Myers, E. J. McCormick, M. B. McGonigle, E. I. McKesson, F. B. McNierney, H. W. Nelles, F. H. Newton, S. C. Niles, H. E. Noble, C. S. Ordway, H. G. Pamment, G. B. Parisen, B. W. Patrick, W. V. Prentice, C. E. Price, H. L. Price, M. D. Rabenoyich, R. L. Ramsey, O. Randolph, G. M. Reinhart, P. W. Rieg, R. D. Robinson, J. D. Salvail, N. N. Sallume, S. R. Salzman, A. H. Schade, M. Schaner, C. D. Selby, N. J. Seybold, W. M.

Shapiro, H. E. Smead, L. F. Smead, A. N. Smith, C. N. Smith, W. H. Snyder, A. L. Steinfeld, C. A. Stephens, W. R. Stephens, R. W. Stewart, J. L. Stifel, Christian Storz, P. G. Tait, L. S. Talaska, W. A. Taylor, C. F. Tenney, G. M. Todd, E. D. Tucker, E. C. Unckrich, C. D. Ury, C. L. Van Pelt, C. W. Waggoner, R. S. Walker, E. F. Ward, M. A. Weightman, J. L. Wenner, Jr., A. W. Wheeler, William Wickham, Dale Wilson, G. M. Wright, J. F. Wright, T. A. Young, J. W. Young, Theodore Zbinden.

*Guests*—E. B. Barlow, G. J. Bigelow, A. H. Galvin, J. P. McInnes, O. G. Walters

#### MAHONING

*Members*—C. R. Clark, R. D. Gibson, F. W. McNamara, C. A. Moore, H. M. Osborne, W. E. Ranz, E. C. Reinhart, J. A. Sherbondy, A. P. Smyth, J. L. Washburn, H. E. Welch, R. E. Whelan.

#### MARION

*Members*—C. L. Baker, D. W. Brickley, L. H. Brilton, R. C. M. Lewis, H. J. Lower, M. B. Newhouse, A. Rhu, C. W. Sawyer, D. D. Shira, N. Sifritt, D. O. Weeks.

#### MEDINA

*Members*—C. A. Bolich, C. L. Crum.

#### MEIGS

*Member*—D. B. Hartinger.

#### MERCER

*Members*—F. E. Ayers, M. L. Downing, L. M. Otis, D. H. Richardson.

#### MIAMI

*Member*—L. A. Ruhl.

#### MONTGOMERY

*Members*—E. R. Arn, R. C. Austin, R. S. Binkley, E. E. Bohlender, Horace Bonner, H. W. Burnett, H. V. Dutrow, Eleanora S. Everhard, A. G. Farmer, Gertrude Felker, Guy G. Giffen, George Goodhue, N. D. Goodhue, H. C. Haning, C. T. Hunt, E. M. Huston, L. M. Jones, C. S. Judy, F. R. Lord, J. H. McCassy, H. H. McClellan, C. C. McLean, J. W. Millette, D. C. Mills, A. O. Peters, C. W. Salisbury, C. E. Shepard, C. D. Slagle, W. S. Smith, F. S. Thomson, B. C. West.

#### MORGAN

*Member*—Louis Mark.

#### MORROW

*Member*—R. L. Pierce.

#### MUSKINGUM

*Members*—R. B. Bainter, E. R. Brush, C. U. Hanna, T. H. Infield, D. J. Matthews, C. P. Sellers, T. L. Sutton.

#### NOBLE

*Member*—J. L. Gray.

#### OTTAWA

*Members*—A. A. Brindley, C. B. Downing, C. B. Finnefrock, T. G. Griest, F. S. Heller, F. D. Ingraham, M. R. Lorenzen, R. A. Willett.

#### PAULDING

*Members*—L. R. Fast, T. P. Fast, J. R. Heath, C. E. Huston, E. D. Murphy.

*Guest*—Ella T. Fast.

### New Section Officers

#### MEDICINE

Chairman.....L. A. Levison, M. D.  
421 Michigan St., Toledo  
Secretary.....C. L. Cummer, M. D.  
Rose Bldg., Cleveland

#### SURGERY

Chairman.....W. D. Haines, M. D.  
1606 Freeman Ave., Cincinnati  
Secretary.....Howard Stitt, M. D.  
Washington C. H., Ohio

#### OBSTETRICS AND PEDIATRICS

Chairman.....W. D. Fullerton, M. D.  
Osborn Bldg., Cleveland  
Secretary.....W. R. Barney, M. D.  
Osborn Bldg., Cleveland

#### EYE, EAR, NOSE AND THROAT

Chairman.....Derrick T. Vail, M. D.  
24 E. Eighth St., Cincinnati  
Secretary.....W. W. Alderdyce, M. D.  
513 Madison Ave., Toledo

#### DERMATOLOGY, PROCTOLOGY AND GENITO-URINARY SURGERY

Chairman.....Augustus Ravogli, M. D.  
5 Garfield Place, Cincinnati  
Secretary.....Hugh Baldwin, M. D.  
347 E. State St., Columbus

#### NERVOUS AND MENTAL DISEASES

Chairman.....R. Harvey Cook, M. D.  
Oxford, Ohio  
Secretary.....Chas. W. Stone, M. D.  
Rose Bldg., Cleveland

#### HYGIENE AND SANITARY SCIENCE

Chairman.....G. E. Robbins, M. D.  
Chillicothe, Ohio  
Vice-Chairman.....N. Sifritt, M. D.  
LaRue, Ohio  
Secretary.....R. R. Richison, M. D.  
City Health Department, Springfield

#### PERRY

*Member*—N. T. McTeague.

#### PICKAWAY

*Member*—G. R. Gardner.

#### PORTAGE

*Members*—E. H. Knowlton, S. U. Sivon, S. L. Sloan, W. J. Thomas.

#### PREBLE

*Member*—W. H. Tucker.

#### PUTNAM

*Members*—C. W. Bird, C. F. Douglass, E. P. Lemley, Frank Light, Frank Morris, H. A. Neiswander, A. F. Sheibley, B. E. Walters, J. D. Waterson, W. S. Yeager.

#### RICHLAND

*Members*—J. M. Burns, W. S. Bushnell, G. T. Goodman, J. E. Gray, W. E. Loughridge, F. A. McCullough, J. L. Stevens, J. A. Yoder.

#### ROSS

*Members*—R. E. Bower, J. M. Hanley, R. W. Holmes, G. E. Robbins.

#### SANDUSKY

*Members*—W. H. Booth, H. E. Deemer, N. B.



Ervin, I. I. Good, E. M. Ickes, B. O. Kreilick, C. I. Kuntz, F. L. Moore, M. O. Phillips, D. W. Philo, C. R. Pontius, R. D. Reynolds, S. C. Sackett, O. H. Thomas, W. Van Nette, O. C. Vermilya, C. J. Wehr.

#### SCIOTO

*Members*—L. D. Allard, H. A. Green, H. F. Rapp, J. S. Rardin, H. A. Schirman, A. L. Test.

#### SENECA

*Members*—C. I. Anders, R. R. Hendershott, J. D. Howe, P. J. Leahy, R. B. Leister, William Leonard, N. C. Miller, E. L. Overholt, R. A. Palmer, E. H. Porter, R. G. Steele.

#### SHELBY

*Members*—Arlington Ailes, M. F. Hussey, Lester Pepper, Arthur Silver.

#### STARK

*Members*—B. C. Barnard, W. H. Burns, H. H. Bowman, R. E. Bunker, J. F. Campbell, G. Y. Davis, J. P. DeWitt, J. B. Dougherty, C. E. Fraunfelter, G. C. Goudy, F. E. Hart, F. G. King, P. F. King, V. E. Kaufman, J. B. Klingensmith, L. E. Leavenworth, W. C. Manchester, E. J. March, W. A. McConkey, E. O. Morrow, L. F. Mutschmann, H. P. Pomerene, R. J. Pumphrey, R. L. Rutledge, R. T. Shipley, J. E. Shorb, T. H. Shorb, H. M. Schuffell, A. B. Walker, W. H. Weaver, H. Welland, G. F. Zinninger.

#### SUMMIT

*Members*—S. B. Berkley, H. A. Briscoe, L. E. Brown, G. M. Campbell, P. A. Davis, E. B. Dyson, C. E. Held, W. A. Hoyt, J. L. Jones, D. B. Lowe, Armin Lowen, D. M. McDonald, R. H. McKay, E. H. McKinney, S. E. McMaster, D. H. Morgan, U. D. Seidel, D. W. Stevenson, H. A. Finefrock.

*Guests*—H. H. Schwartz, E. B. Thompson.

#### TRUMBULL

*Members*—M. D. Ailes, S. V. Kennedy, W. W. McKay, D. R. Williams.

#### TUSCARAWAS

*Members*—W. F. Demuth, Lloyd Jonnes, S. B. McGuire, E. B. Shanley.

#### UNION

*Members*—S. J. Bown, C. D. Mills, H. G. Southard.

#### VAN WERT

*Members*—W. P. Clay, S. A. Edwards, N. E. Leake, R. J. Morgan.

#### WARREN

*Members*—N. A. Hamilton, C. A. Hough.

#### WAYNE

*Members*—Van I. Allen, E. N. Funk, H. A. Hart, G. W. Ryall, A. C. Smith, O. P. Ulrich, T. A. Weaver, J. G. Wishard, H. M. Yoder.

#### WILLIAMS

*Members*—C. M. Barstow, H. M. Byall, O. D. Critchfield, A. G. Goll, M. V. Replogle, A. E. Snyder, J. A. Weitz.

*Guest*—R. R. Alwood.

#### WOOD

*Members*—A. A. Babione, I. S. Bowers, M. H. Bowers, F. S. Boyle, L. R. Carr, H. D. Covert,

G. W. Foltz, J. C. Gallagher, C. C. Greiner, F. D. Halleck, C. B. Hatfield, M. A. McKendree, E. A. Powell, W. H. Price, J. W. Rae, M. H. Rheinfrank, A. H. Rine, J. C. Snyder, D. B. Spitler, J. J. Stitt, G. F. Van Pelt, W. J. Walker, H. E. Ward.

*Guests*—D. R. Barr, D. R. Canfield, W. W. Mannhardt, Lydia McKendree, D. W. Reddin.

#### WYANDOT

*Members*—Frederick Kenan, I. N. Zeis.

*Guest*—S. R. Bame.

#### FOREIGN GUESTS

Louis Andre, Wheeling, W. Va.; Lewellys Barker, Baltimore, Md.; D. B. Best, Wheeling, W. Va.; Hugh Cabot, Ann Arbor, Mich.; R. M. Eccles, Blissfield, Mich.; C. H. Heffron, Adrian, Mich.; G. H. Lemley, Blissfield, Mich.; Kenneth Noble, Milan, Mich.; W. L. Peters, Jasper, Mich.; Phillip D. Kerrison, New York City; Robert Lockhart, Owensboro, Ky.; Charles F. Neu, Indianapolis, Ind.; L. J. Pollock, Chicago, Ill.; C. A. Stayton, Indianapolis, Ind.; C. A. Van Dusen, Blissfield, Mich.; S. C. Waters, Middletown, Ind.; J. L. Yeagley, Waldron, Mich.

### Ex-Service Members Meet

Ex-service members of the State Association met informally on the second day of the annual meeting in Toledo for the purpose of organizing a state society of World War veterans. Dr. William Gillespie of Cincinnati presided as chairman at the meeting, which was attended by about fifty Ohio physicians who, during the late unpleasantness with Germany, wore with pride for their country and honor to themselves the conventional khaki.

The question of affiliating with the national organization known as the Medical Veterans of the World War was considered at length but it was decided by those present to postpone a decision in this matter until the next annual meeting of the State Association in Columbus. Quite a number signed applications for membership in the Medical Veterans of the World War and it is expected a larger delegation will be present at the Columbus meeting.

The objects of the temporary organization effected at Toledo, and of which Dr. Charles T. Hunt of Miamisburg was elected president, and Dr. H. H. McClellan of Dayton, secretary, will be set forth in a future issue of *The Journal*, so that all concerned may be properly informed.

#### OBSTETRIC NURSES

The Section on Obstetrics and Pediatrics, at its meeting in Toledo on June 2, appointed a committee composed of Dr. S. J. Goodman, chairman, Dr. Andrews Rogers, of Columbus, and Dr. W. W. Brand, of Toledo, to meet with the legislative committee of the Ohio State Medical Association, with a view of recommending certain legislation which would provide a one-year course for nurses in obstetric cases.

## The Election of Dr. John C. Reeve of Dayton, as President-Emeritus, An Honor Well Placed

FOR the first time in its history the Association, during the Toledo annual meeting, elected a president-emeritus, an honorary office created by the constitution and by-laws adopted in 1919. The recipient of this honor is Dr. John C. Reeve, of Dayton, a life member of the Association, who passed his ninety-fourth milestone just two days after his unanimous election as president-emeritus of the Association.

Despite his advanced years Dr. Reeve is alert mentally and physically and his interest in professional subjects and in organization work remains keen. He is a constant reader of medical writings and of French literature and general subjects, and is even now an occasional contributor to medical publications, notably *The Medical Pickwick*. Remarkably well informed on current questions of

the day, Dr. Reeve is able to discuss them in an intensely interesting and discerning manner.

Born in southern England in 1826, Dr. Reeve came to America at the age of six years. Though handicapped by conditions in youth that prevented him from pursuing a course such as is given the average youth for the purpose of laying a foundation upon which he might build a superstructure in more advanced age, he succeeded by dint of his own efforts, developing mental powers acquired by few men. Being forced early in life to depend upon his own re-

sources, Dr. Reeve had to relinquish his school work at the age of twelve years, but this did not deter him from continuing his studies.

Dr. Reeve began his medical studies under Dr. John Delamanter of Cleveland, instructor in the medical department of Western Reserve Univer-

sity. He first located for practice in Dodge county, Wisconsin, but after four years again went to Europe, where he pursued research work under the direction of some of the most renowned physicians and surgeons of the old world. He returned to America in 1854 and settled in Dayton, where he continued the practice of medicine and surgery until about ten years ago when he retired from active practice.

The present honor is not the first to come to Dr. Reeve. He served as president of the State Association in



1884-5, and of Montgomery County Medical Society, and is connected with a number of other scientific bodies, holding membership in the American Gynecological Society and honorary fellowship in the College of Physicians of Philadelphia.

Certainly, the Association has made no mistake in selecting Dr. Reeve as its first president-emeritus, an office which the constitution states shall be regarded as "recognition of unusually distinguished ability or service by the member so honored." In its choice the Association has likewise honored itself.



## Election of Officers and Committees, Adoption of Reports and Decision on Vital Policy Matters Featured Sessions of House of Delegates

The House of Delegates of the Ohio State Medical Association met in the Auditorium, Y. M. C. A. Building, Toledo, Tuesday, June 1, 1920. Meeting was called to order by Dr. J. F. Baldwin, president.

Forty-seven delegates and ten officers responded to roll call.

Dr. Upham moved that the president appoint a Reference Committee for consideration of the President's address; a Reference Committee for consideration of the published reports of the Standing Committees; and a Reference Committee on Resolutions, with instructions from the House that the Reference Committee on the President's address refer that section relative to medical colleges, to the Council for longer and more thorough consideration and future action.

Motion was seconded by Dr. Hazelton, and carried.

Dr. Baldwin announced the following appointments: to serve on the Committee on President's Address: Dr. J. E. Tuckerman, Cleveland, Dr. E. O. Smith, Cincinnati, and Dr. L. A. Levison, Toledo. Committee on Report of Standing Committees, Dr. D. C. Houser, Urbana, Dr. J. P. DeWitt, Canton, and Dr. J. J. Moore, South Charleston; Committee on Resolutions, Dr. G. E. Follansbee, Cleveland, Dr. Louis Schwab, Cincinnati, and Dr. A. W. Francis, Ripley, Ohio.

On motion, seconded, the minutes of the House of Delegates for the 1919 annual sessions, were approved as published in the June, 1919, issue of *The Journal*.

Dr. Mark Millikin presented resolution relative to uniform medical practice laws in the United States. On motion, seconded, resolution was referred to the Committee on Resolutions.

Dr. Teachnor presented a resolution endorsing the work of the Ohio Public Health Association, and a resolution relative to cooperation with the Ohio State Teachers' Association in public health work. On motion, seconded, these resolutions were referred to the Committee on Resolutions, for recommendations to the next session of the House of Delegates.

Dr. Upham presented resolution relative to the proposal of the Ohio Institute for Public Efficiency to conduct a survey to ascertain the needs of crippled children; and a resolution endorsing the work of the medical department of the Industrial Commission. On motion, seconded, resolutions were referred to the Committee on Resolutions.

Dr. Keil presented resolution relative to action of the General Assembly in amending Ohio lunacy laws. On motion, seconded, resolution was referred to the Committee on Resolutions.

On separate motions, duly seconded, the following nominations were made for the Nominating Committee:

First District—Dr. E. O. Smith.

Second District—Dr. George Goodhue.

Third District—Dr. J. C. Tritch.

Fourth District—Dr. C. W. Waggoner.

Fifth District—Dr. H. A. Berkes.

Sixth District—Dr. D. H. Morgan.

Seventh District—Dr. J. S. McClellan.

Eighth District—Dr. D. J. Matthews.

Ninth District—Dr. M. H. Cherrington.

Tenth District—Dr. John B. Alcorn.

### REPORTS OF OFFICERS

In presenting the Treasurer's Report for 1919, Dr. H. M. Platter stated that the published and signed statement of the Auditor constituted his report for 1919.

On motion, seconded, the report as published on page 443 of the June issue, was accepted.

On motion, seconded, the reports of the Councilors covering membership in their respective districts, were accepted as published on page 451 of the June issue of *The Journal*.

On motion, seconded, the report of the Publication Committee was accepted as published on page 437 of the same issue of *The Journal*.

### REPORTS OF STANDING COMMITTEES

On motion, seconded, the published report of the Committee on Public Policy and Legislation was accepted as published on page 438 of June *Journal*.

Dr. J. H. J. Upham presented supplementary report covering action of the House of Delegates of the American Medical Association. On motion, seconded, report was referred to the Committee on Resolutions.

Dr. Tuckerman in commenting on the published report of the Committee on Medical Defense, of which he is the chairman, emphasized the importance of having X-ray pictures in all fracture cases, and of the necessity of paying dues promptly to insure protection throughout the year. On motion, seconded, the report was accepted as published on page 442 of the June issue of *The Journal*.

Dr. Teachnor presented the report of the Committee on Auditing and Appropriations for the year 1920. On motion, seconded, the appropriations as presented for the year 1920 were approved.

On motion, seconded, the published report of the Auditor, (page 443, June issue) was accepted and approved as the report of the Commit-

tee on Auditing and Appropriations and the Treasurer, for the year 1919.

On motion, seconded, the report of the Committee on Medical Education was approved and accepted as published on page 446 of the June issue of *The Journal*.

On motion, seconded, the report of the General Secretaries Committee was accepted as published on page 447 of the June issue of *The Journal*.

#### REPORTS OF SPECIAL COMMITTEES

Dr. Crotti, chairman of the Committee on Cancer, supplemented his report, as published on page 450, by urging the continuance of the special committee in order that the work might be continued along the lines inaugurated during the past year. On motion, seconded, Dr. Crotti's report, with recommendation for continuance of the work, was accepted.

Dr. Goodman in presenting his published report for the Committee on Sociology, stated that the recommendations in the report were covered in a paper to be presented before the Section on Obstetrics, and would be published in *The Journal* at a later date. On motion, seconded, the report was accepted as published on page 445 of the June issue of *The Journal*.

Dr. Selby, chairman of the Committee appointed by the President, to cooperate with the Industrial Commission in formulating a new fee schedule, outlined the work accomplished by his committee, and called attention to the revised fee schedule, effective June 1, 1920, as published on page 435 in the June issue of *The Journal*.

On motion, seconded, the report of the Committee on Hospital Standardization, was accepted as published on page 449 of the June issue of *The Journal*.

On request, Dr. Freiberg was granted the privilege of the floor, and explained the work inaugurated by the Ohio Institute for Public Efficiency, in the survey to ascertain the need of hospital facilities for the care of crippled children in Ohio. [Resolution endorsing this work, and pledging the cooperation of the State Association was introduced by Dr. Upham, and referred to the Committee on Resolutions.]

Dr. E. S. Jones was granted the privilege of the floor to extend an invitation for all ex-service men to meet this evening at 7:30, in the Auditorium, Y. M. C. A.

On motion, seconded, the first session adjourned at 12:00 to meet Wednesday afternoon, June 2, at 1 P. M.

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#### SECOND SESSION

The second session of the House of Delegates was called to order at 1 P. M., Wednesday, June 2, 1920, in the Auditorium, Y. M. C. A., Toledo. Fifty-four delegates and ten officers responded to roll call.

Dr. C. W. Waggoner, Chairman, submitted the following report of the Nominating Committee:

*For President-Elect:* Dr. Wells Teachnor, Columbus; Dr. J. S. Rardin, Portsmouth, and Dr. J. P. Baker, Findlay. (One to be elected.)

*Committee on Public Policy and Legislation:* Dr. J. H. J. Upham, Columbus; Dr. A. H. Freiberg, Cincinnati; Dr. J. B. Alcorn, Columbus.

*For Publication Committee:* Dr. L. L. Bigelow, Columbus; Dr. E. R. Brush, Zanesville; Dr. D. V. Courtright, Circleville.

*For Committee on Medical Defense:* Dr. C. T. Souther, Cincinnati, (three-year term); Dr. W. H. Snyder, Toledo, (for one-year term, to fill vacancy created by the resignation of Dr. W. J. Stone, of Toledo.)

*For Committee on Medical Economics:* Dr. H. L. Sanford, Cleveland; Dr. Webster Smith, Dayton; Dr. Jacob Hyman, Logan.

*For Councilors:* (Those in odd-numbered districts to be elected for a term of two years).

First District—Dr. Robert Carothers, Cincinnati.

Second District—Dr. W. A. Ewing, Dayton, (to fill unexpired term of Dr. J. E. Hunter, Greenville, resigned).

Third District—Dr. R. R. Hendershott, Tiffin.

Fifth District—Dr. R. K. Updegraff, Cleveland.

Seventh District—Dr. J. S. McClellan, Bellaire.

Ninth District—Dr. M. H. Cherrington, Logan.

*For Delegates to the American Medical Association (two-year term):* Dr. J. H. J. Upham, Columbus; Dr. Ben R. McClellan, Xenia; Dr. C. D. Selby, Toledo; Dr. G. E. Follansbee, Cleveland; Dr. Granville Warburton, Zanesville; Dr. W. D. Haines, Cincinnati.

*For Alternates to the American Medical Association (two-year term):* Dr. D. H. Morgan, Akron; Dr. L. D. Allard, Portsmouth; Dr. R. C. M. Lewis, Marion; Dr. H. M. Platter, Columbus; Dr. C. L. Minor, Springfield; Dr. Dudley Palmer, Cincinnati.

*For President-Emeritus:* Dr. John C. Reeve, Dayton.

\* \* \*

On motion, seconded, the House of Delegates accepted the report of the Nominating Committee.

#### ELECTION OF PRESIDENT-ELECT

On motion of Dr. Bonifield, seconded, the President appointed Drs. D. C. Houser, D. J. Matthews, and H. M. Platter, as tellers.

The first ballot cast for President-Elect resulted as follows: Teachnor, 47; Rardin, 10; and Baker 3. Dr. Teachnor was declared elected by a majority of 34.

#### ELECTION OF COUNCILORS

Dr. Cherrington requested that his name be withdrawn as a candidate for councilor, and nominated Dr. J. S. Rardin, as a candidate for



councilor of the ninth district. Seconded and carried.

Dr. Alcorn called attention to the vacancy created in the Tenth Councilor District by the election of Dr. Teachnor as President-Elect, and moved that Dr. S. J. Goodman, of Columbus be nominated as a candidate for councilor of the Tenth District. Seconded and carried.

Dr. Tuckerman moved that the rules be suspended and the secretary be instructed to cast a ballot for the remainder of the nominations. Seconded and carried unanimously.

The secretary then cast the ballot as directed and the chair declared candidates unanimously elected, as follows:

*Committee on Public Policy and Legislation:* Dr. J. H. J. Upham, Columbus; Dr. A. H. Freiberg, Cincinnati; Dr. J. B. Alcorn, Columbus.

*Publication Committee:* Dr. L. L. Bigelow, Columbus; Dr. E. R. Brush, Zanesville; Dr. D. V. Courtright, Circleville.

*Committee on Medical Defense:* Dr. C. T. Souther, Cincinnati, for three-year term; Dr. Walter H. Snyder, Toledo, for one-year term.

*Committee on Medical Economics:* Dr. H. L. Sanford, Cleveland; Dr. Webster Smith, Dayton; Dr. Jacob Hyman, Logan.

#### *Councilors:*

First District—Dr. Robert Carothers, Cincinnati.

Second District—Dr. W. A. Ewing, Dayton, (to fill unexpired term of Dr. J. E. Hunter, Green-ville).

Third District—Dr. R. R. Hendershott, Tiffin.

Fifth District—Dr. R. K. Updegraff, Cleveland.

Seventh District—Dr. J. S. McClellan, Bellaire.

Ninth District—Dr. J. S. Rardin, Portsmouth.

Tenth District—Dr. S. J. Goodman, Columbus, (to fill unexpired term of Dr. Wells Teachnor, who was chosen president-elect.)

*Delegates to the American Medical Association:*

#### DELEGATES

Dr. J. H. J. Upham, Columbus; Dr. Ben R. McClellan, Xenia; Dr. C. D. Selby, Toledo; Dr. G. E. Follansbee, Cleveland; Dr. Granville Warburton, Zanesville; Dr. W. D. Haines, Cincinnati.

#### ALTERNATES

Dr. D. H. Morgan, Akron; Dr. L. D. Allard, Portsmouth; Dr. R. C. M. Lewis, Marion; Dr. H. M. Platter, Columbus; Dr. C. L. Minor, Springfield; Dr. Dudley Palmer, Cincinnati.

*For President-Emeritus, (for one year):* Dr. John C. Reeve, of Dayton, Ohio.

\* \* \*

On motion, seconded, Dr. Alcorn was appointed by the President as a committee of one to bring Dr. Teachnor, the newly elected President-elect to the room.

Dr. Pierce moved that the 1921 meeting of the State Association be held in Columbus. Seconded and carried.

The following report was submitted by the

Reference Committee on the President's Address:

To the House of Delegates,

Ohio State Medical Association:

Gentlemen:—

So many topics weighted with controversial possibilities were touched in the passing by the president that in formulating a report your committee with great difficulty resisted a temptation to emulate "the stern iconoclastic spirit" so brilliantly exemplified by the president in his annual address. Furthermore, the committee was acutely conscious of "an active skepticism" which reluctant to remain submerged in the realm of the sub-conscious kept obtruding uninvited questionings.

Realizing, however, their own limitations but none-the-less mindful that established custom calls for a definite report, your committee has the honor to submit the following recommendation:

1. That: The House of Delegates request *The Journal* through its columns to acquaint the members of the Association with the provisions of a recent act of the legislature which provides through and under the supervision of the State Board of Charities, medical and surgical treatment and care for crippled children, whose parents are unable to adequately so provide, in the nearest suitable institution.\*

2. That the Association through the House of Delegates endorse the need for a critical review of the present status of general anesthesia, and in particular urge the necessity of a careful collection of reports upon the specific types of anesthesia with a view to an analysis of detailed reports covering all particulars of the administration as given in representative institutions to the end that the profession may not have to depend for its guidance in the use of the newer anesthetics upon haphazard evidence or casual personal communications.

3. That the Association through the House of Delegates endorse the suggestion that every medical school should have a chair of medical history in order that the students may acquire a proper historical perspective of the profession which they are about to enter.

The Committee believes that among numerous tentative suggestions there are some of which the Association should take cognizance lest the partial statement of matters of suggestive import be misinterpreted by the unformed as a statement of a final conclusion. It would be particularly unfortunate were any unqualified intimation of perfunctory performance of duty allowed to lie against a committee of the American Medical Association in the absence of adequate supporting evidence. It is important that no impression of finality should attach to certain uncompleted suggestions as to the direction in which education of the laity upon medical subjects might be undertaken; the manner in which the

\*See resolution on page 530 and provisions of law set forth on page 536.

Council on Pharmacy and Chemistry of the American Medical Association does and might proceed in its review of new and non-official remedies; or the methods to be pursued in combatting the growth of cults.

Further, the committee feels that there are many paragraphs in the address, uncompleted as presented, that might and undoubtedly would be the occasion of unfortunate misinterpretation by inference, (as evidenced by the well-known misinterpretations of sayings both of the late Dr. Osler and our Dr. Cabot) and that the address should not be printed in its present form.

Signed J. E. Tuckerman,  
E. O. Smith,  
L. A. Levison.

It was moved and seconded that the report be adopted. Carried.

\* \* \*

Dr. George E. Follansbee, chairman of the Reference Committee on Resolutions, reported as follows:

Resolution No. 1, introduced by Dr. Upham, of Franklin County:

Whereas, the Ohio Legislature has appointed a commission and provided a sum of money for a hospital for crippled children, and

Whereas, it would appear that no definite policy for the treatment of these unfortunates has been adopted, other than the mere provision for a hospital, and

Whereas, the Ohio Institute for Public Efficiency has a committee seeking a progressive and broad policy to be followed in the future, such as may embrace and coordinate private and philanthropic efforts seeking the same end, and asks the cooperation of the Ohio State Medical Association, and

Whereas, certain private agencies are making commendable efforts toward inaugurating a systematic state-wide care of crippled children,

Be It Resolved, that the Ohio State Medical Association heartily endorses the idea of state aid for crippled children, and that through a special committee appointed by the president, it will cooperate in every way possible with the state Commission, the State Institute for Public Efficiency, and any private agencies already active, and endeavor to coordinate all efforts to the same end, and further

Be It Resolved, as the first step, it authorizes council to take measures to aid in a survey of the state in order to learn the actual present conditions regarding crippled children who may need state aid.

Your Committee recommends that this resolution be approved and adopted.

Moved and seconded that recommendation be accepted. Carried.

Resolution No. 2, introduced by Dr. Upham of Franklin County:

Whereas, a cordial relationship exists between the State Industrial Commission and the Ohio State Medical Association, thus making possible mutual cooperation in carrying out the provisions of the Workmen's Compensation Act, and

Whereas, this cooperation is largely due to the fairness and efficiency of the Commission's medical department, and

Whereas, The Industrial Commission has recently adjusted its medical and surgical fee schedule on a more equitable basis, thereby recognizing the fundamental importance of medical service in dealing with the beneficiaries under the act, and

Whereas, this cooperation and the inauguration of the new schedule were largely due to Dr. T. R. Fletcher, chief medical examiner of the Industrial Commission, and

Whereas, the present remuneration to the medical director and his staff is manifestly and absurdly inadequate in consideration of their genuine service to the state,

Therefore Be It Resolved, that the Ohio State Medical Association expresses its appreciation of the cooperation of Dr. Fletcher and his medical department, cordially commends the record of the Commission's medical staff, and pledges its efforts to secure more just compensation for their services.

Your committee recommends that this resolution be approved and adopted.

On motion, seconded, recommendations of the committee were accepted. Carried.

Resolution No. 3. Introduced by Dr. Keil, of Franklin County:

"Whereas, the last General Assembly of Ohio, at the instigation of the Auditor of State, in an effort to reduce the cost of government, amended the Ohio laws, so as to make it necessary for a friend or relative or stranger seeking to give state protection to the public and to some needy lunatic, imbecile, or addict to either assume the cost of legal commitment, or to declare the patient's financial responsibility, or to declare the patient a pauper, by signing a poor certificate, and

"Whereas, in this effort at economy, no provision for witness fee, medical or non-medical, nor for mileage for witness is made, but a specific provision is made for limiting the fee of each of the certifying physicians to five dollars, for all services rendered the court in the case, regardless of the number of observations necessary for justice.

"Therefore, Be It Resolved that the Legislative Committee of the Ohio State Medical Association ask the General Assembly of Ohio and the Auditor of State in their efforts at economy to more carefully consider the welfare and rights of the unfortunate, and the work of competent medical service, and to restore the former provision for the commitment of patients to the state hospitals of Ohio."

Your committee recommends that this resolution be referred to the Legislative Committee for its consideration and for such action as it deems proper.

On motion, seconded, the recommendations were adopted.

Resolution No. 4, introduced by Dr. Millikin, of Butler County:

Whereas, in our forty-eight states there are as many separate medical examining boards, and

Whereas, licensed physicians in one state may not always practice in other commonwealths without vexatious examinations and expense, and

Whereas, the government in time of war frequently sent physicians into army camps in other states, and therefore disregarded state boundaries, and

Whereas, there is practically homogeneity in the anatomical and psychological makeup of the people in the various states, and

Whereas, the same may be said of the physicians throughout the land.

Therefore, Be It Resolved, that it is the opinion of the House of Delegates that the right to practice in one state should be extended to include the right to practice medicine in any part of the United States.

Be It Further Resolved that a copy of this resolution be sent to the proper officials of all medical societies, and to national and quasi-national medical associations, and that the American Medical Association be especially urged to perfect a plan by which interstate medical practice be made as easy as interstate commerce."

Your Committee recommends that this resolution be approved and adopted.

On motion, seconded, recommendations of the Committee were adopted.

Resolution No. 5, introduced by Dr. Teachnor:

"Whereas, there has been a lack of uniformity in health and physical instruction in the public schools, and

Whereas, there is a need for centralized supervision in the promotion of physical development in the younger generation, and

Whereas, the House of Delegates of the American Medical Association, at its last meeting requested each state medical association to interest itself in this important subject by authorizing the selection of a special committee to proffer its assistance to, and cooperation with the respective state teachers' association,

Therefore, Be It Resolved that the President of the Ohio State Medical Association be authorized to appoint a committee of three members to study the problem, to attend the next annual meeting of the Ohio State Teachers' Association, to request that a committee from the latter organization unite with the committee from the Association in a concerted effort to promote better health conditions in the schools, to the end that a constructive program in health education may be formulated and made effective in Ohio.

Your Committee recommends that this resolution be approved and adopted.

On motion, seconded, recommendations of the committee were accepted.

Resolution No. 6, introduced by Dr. Teachnor:

"Whereas, the Ohio State Medical Association is fundamentally interested in the mitigation of the suffering of



humanity and in removing the cause of physical afflictions, and

Whereas, the Ohio Society for the Prevention of Tuberculosis has extended its membership and widened its scope by a merger with a new and broader purpose with the formation of the Ohio Public Health Association, and

Whereas, the purposes of the new organization include the dissemination of knowledge concerning the prevention of disease, the promotion of the organization and work of local public health leagues, the encouragement and support of organized official work for the prevention of disease; the encouragement of adequate provision for the prevention of disease by the establishment of hospitals, sanatoria, clinics, dispensaries, and nursing service, and

Whereas, the President of the Ohio Public Health Association has requested that the Ohio State Medical Association designate two members for its board of trustees for a period of five years,

Therefore, Be It Resolved that this Association endorse the humanitarian spirit and objects of the Ohio Public Health Association, that cooperation be pledged, and that proper provision be made by this body for the selection of two representatives of the Ohio State Medical Association as nominees for the board of trustees of the Ohio Public Health Association.

Your Committee recommends that this resolution be approved and adopted.

On motion, seconded, recommendations of the committee were accepted.

\* \* \*

Supplementary Report of Dr. J. H. J. Upham, Chairman of the Committee on Public Policy and Legislation, as Delegate to the American Medical Association meeting in New Orleans, April 26-30, 1920:

The recent meeting of the American Medical Association was a very important one, and a study of the transactions will demonstrate that the plan of returning each year at least two or three delegates with more or less regularity is resulting in the obtaining of greater recognition for Ohio in the House of Delegates, and giving your representatives more opportunity and influence in that organization.

The scope and variety of subjects considered this year will show the great activity of our profession in important questions of the day.

The report of the Council on Medical Education indicates a thorough appreciation of the present needs of the student of medicine and of the efforts being made by the colleges to meet them. Constant supervision is being maintained, and a new general survey and classification is ordered for the near future.

The report of the Council on Legislation and Public Relations indicates that the Association is equally progressive and active in this field. It is actively supporting the project for all the federal health activities as a hoped-for preliminary step toward a Department of Health; it is continuing its collection of medico-legal data; it has pushed the effort to obtain uniform methods of registration of vital statistics, until only five states remain, which do not have the model law; its sub-committee investigated the narcotics drug situation, and arraigned the practice of ambulatory self-dosing method of treatment of addicts, and recommended the elimination of heroin as a drug. It also recommended a federal investigation of the needs of the country as regards drugs with a view to federal control and distribution.

In regard to compulsory health insurance, the House of Delegates took decisive action, voicing its opposition to any plan embodying such a system, either by a state or the Federal Government.

Several other resolutions and activities were endorsed, viz:

1. Endorsing the inauguration of a Federal Department of Health.
2. The appointment of a special committee to study and devise methods of combatting syphilis.
3. The investigation of the practice of sending indigent consumptives from one state to another.
4. The investigation of the promiscuous exploitations of endocrine preparations, with the view of restricting such promiscuous use.

5. The investigation of leprosy and the urging of the establishment of a national leprosarium.

6. The commending the U. S. Public Health Department in the treatment and prevention of trachoma.

7. Endorsement of President Lambert's suggestions regarding the inspection and grading of hospitals.

The House of Delegates elected Dr. Hubert Work of Colorado as the President-Elect. This action was a recognition of the long and valuable services rendered the Association by Dr. Work.

The meeting adjourned to meet in Boston in 1921.

(Signed) J. H. J. Upham, Chairman.

Your Committee recommends that this report be accepted and filed.

On motion, seconded, the report of the Reference Committee on Resolutions, as a whole, was adopted.

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Dr. Houser, chairman of the Reference Committee for the consideration of the published reports of the standing committees, reported as follows:

"After carefully considering the various reports contained in The Journal of June 1, 1920, your committee wishes to most enthusiastically commend said reports and urge that every member of the Association give them a careful reading in order to know how faithfully these various committees have served the Association. We recommend the adoption of the reports as published in The Journal of June 1, 1920."

On motion, seconded, recommendations of the committee, were accepted.

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Dr. Schwab moved that a vote of thanks be extended to the Toledo Academy of Medicine for the splendid manner in which they entertained the Association. Seconded by Dr. Cherrington and carried.

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Following a brief discussion relative to health insurance, Dr. Upham moved that the House of Delegates of the State Association endorse the action taken by the House of Delegates of the American Medical Association, in passing the following resolution:

"Resolved, that the American Medical Association declares its opposition to the institution of any plan embodying the system of compulsory contributory insurance against illness, or any other plan of compulsory insurance which provides for medical service to be rendered contributors or their dependents, provided, controlled or regulated by any State or the Federal Government."

Seconded by Dr. Hazelton. Carried.

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The Committee appointed to bring Dr. Teachnor, the President-Elect, reported that he could not be found.

\* \* \*

Dr. Baldwin, in retiring, thanked the members of the Association for the interest manifested during the two years he served as president-elect and president, and the members of the House of Delegates for their cooperation and support.

In a few well chosen words, Dr. Lukens, in accepting the chair as President, expressed appreciation for the honor accorded him by the Association, and pledged his time and effort in unstinted measure in serving the profession with the help and cooperation of the officers and members.

There being no further business, the House of Delegates adjourned.

## Minutes of Council Meetings

Council of the Ohio State Medical Association met at the Secor Hotel, Toledo, May 31, 1920. Members present: President Baldwin, President-elect Lukens, Ex-president Smith; Treasurer Platter; Councilors Carothers, Hendershott, Keller, Updegraff, March, McClellan, and Teachnor; Dr. J. H. J. Upham, Chairman of the Committee on Public Policy and Legislation, Dr. C. W. Waggoner, Chairman of the Entertainment Com-

mittee for the Annual Meeting, and the Executive Secretary.

The membership statement presented by the Executive Secretary, showed the total on May 31 of 4655 was only 40 short of the total for the entire year of 1919, and approximately 150 members ahead of the paid up membership on May 31, 1919.

Dr. H. M. Platter, treasurer, reported on the financial status of the Association, supplementing the regular monthly report mailed to officers.

The Executive Secretary presented letter from Dr. Colwell, of the American Medical Association, asking continuance of the Committee on Hospital Standardization. After discussion, it was the opinion of Council that the incoming president should appoint such committee to continue the work during 1920.

The Executive Secretary read letter from Dr. Frederick R. Green, of the Council on Public Instruction, A. M. A., requesting that the State Association cooperate with the Ohio State Teachers' Association in public health work. Council recommended that the House of Delegates take action upon a resolution embodying the suggestions by Dr. Green.

Dr. Upham outlined a proposal of the Ohio Institute for Public Efficiency through a committee headed by Dr. Freiberg, of Cincinnati, and requested that the House of Delegates, through resolution, offer the assistance of the State Association in cooperating with Dr. Freiberg's committee in the work of conducting a survey to ascertain the need of hospital facilities for crippled children in Ohio. On motion of Dr. Smith, seconded by Dr. Carothers, Council endorsed the suggestions, and voted to refer the matter to the House of Delegates.

The Executive Secretary read a letter from Dr. C. B. Bliss, president of the newly organized Ohio Public Health Association, asking that the State Association name two members to serve on the board of trustees. On motion of Dr. Updegraff, seconded, Council voted to incorporate this suggestion in the resolution presented to the House of Delegates, pledging cooperation with the new organization.

After informal discussion, the president was instructed to appoint from the House of Delegates, the following committees, of three members each:

Reference Committee on President's Address; Reference Committee for consideration of Resolutions introduced in the House of Delegates; and Reference Committee for consideration of published reports of standing committees. This action was requested because there is no constitutional provision for such committees, and in past years all resolutions and reports of standing committees have been referred to the Committee on President's Address.

Dr. Baldwin submitted the resignation of Dr.

John E. Hunter, councilor of the Second District. On motion of Dr. Teachnor, seconded by Dr. Carothers, Dr. Hunter's resignation was accepted with regret, and the secretary was instructed to notify the House of Delegates of Dr. Hunter's resignation, and to request the Nominating Committee to include the Second District in the list of councilor districts for which councilors are to be elected this year.

The Auditing and Appropriations Committee, to which the request for an increase of salary for the Executive Secretary presented at the last meeting of Council, was referred to report at this meeting, recommended that the salary of the Executive Secretary be fixed at \$5,000 for one year, beginning June 1, 1920. On motion of Dr. Hendershott, and seconded by Dr. Updegraff, the Council voted unanimously to accept the report of the Committee, and increased the salary of the Executive Secretary to \$5,000 for one year. On motion of Dr. Keller, seconded by Dr. Carothers, the Auditing and Appropriations Committee was authorized to increase the appropriation for Executive Secretary salary, to cover the increase.

On motion, seconded, Council adjourned to meet with the House of Delegates, Tuesday, June 1, at 11 A. M.

Wells Teachnor, M. D.,  
Secretary of Council.

Council of the Ohio State Medical Association met, June 2, 1920, in the Auditorium, Y.M.C.A., Toledo, following adjournment of the House of Delegates. Members present: President Lukens, Ex-president Baldwin, Councilors Hendershott, Updegraff, Keller, March, Headley, McClellan, and Carothers. Dr. Lukens in the chair, Dr. Carothers, secretary pro-tem.

The Council organized by electing Dr. S. J. Goodman, Councilor of the Tenth District, as secretary of Council.

The time for the first regular meeting was set for Sunday, June 27th, 1:30 P. M., Eastern time, at Hotel Deshler, Columbus.

Adjourned to meet Thursday, June 3.

Robert Carothers, M. D.,  
Secretary Pro-tem.

### American Medico-Psychologists

The American Medico-Psychological Association held its seventy-sixth annual meeting at the Hotel Statler, Cleveland, June 1-4. The association is the oldest medical organization in North America and its membership includes the heads of leading institutions for nervous and mental diseases in the United States and Canada. Dr. Henry C. Eyman of Massillon presided at the meeting as president, and the list of Ohioans who participated in the program included Drs. Emerson A. North, Cincinnati; W. H. Pritchard, Columbus; C. H. Clark, Athens, and H. H. Drysdale, Cleveland.



## Questions Propounded by the State Medical Board in the June Examinations

At the regular licensing examinations conducted by the State Board of Medical Registration on June 8-11, one hundred and sixty physicians appeared to qualify. In addition to the five Ohio schools—Ohio State University College of Medicine, Ohio State University College of Homeopathic Medicine, Western Reserve University, University Cincinnati College of Medicine, and Cincinnati Eclectic Medical College—the applicants represented the following out-of-state colleges: Vanderbilt University, Jefferson, Johns Hopkins, Meharry, Rush, Harvard, Loyola, Hahnemann, Chicago College of Medicine and Surgery, University of Pittsburgh, Howard University, and the Universities of Pennsylvania, Tennessee and Oklahoma. The questions propounded by the board were:

### MATERIA MEDICA (Regular)

1. (a) Give indications for use of aconite, belladonna, digitalis. (b) Name the official preparation of each and give dosage. 2. Give the therapeutic indication, dose and mode of administration of three serums. 3. Name three drugs used as an (a) anodyne (b) emetic (c) cathartic. Give dose of each. 4. Name the principal potassium salts. Give dose of each and indication for use. 5. Give doses of strychnia sulphate; chloral hydrate; morphine sulphate; calomel; pilocarpin hydrochlorates; potassium bromide; sodium salicylate. 6. Name four drugs used hypodermatically, with dose of each. What precaution should be observed in administration? 7. What drugs would you advise in acute articular rheumatism? Write a prescription. 8. Give indications for use of arsenic. In what forms is it used? Give dose of official preparations. 9. Name three remedies classified as intestinal antiseptics. Give indications for their use, and doses. 10. Give indications for the use of opium. Name its principal alkaloids and give dose of each.—L. H.

### MATERIA MEDICA (Homeopathic)

1. Name and give characteristic symptoms of three remedies in the treatment of influenza. 2. Differentiate between Baptisia Arsenicum and Rhus Tox in the treatment of typhoid fever. 3. Describe the effect of Cantharis as applied locally in burns and prescribed internally for urinary disorders. 4. How do you determine the efficiency of drugs? 5. Give three remedies to be prescribed in menorrhagia with characteristic symptoms of each. 6. Give characteristic symptoms of Aconite, Belladonna and Veratrum Viride. 7. Name three remedies indicated in the treatment of arterio sclerosis. 8. What are tissue remedies? 9. Why does trituration increase the action and effectiveness of drugs? 10. What do you under-

stand by drug affinity for special organs and tissues? Give examples.—C. E. S.

### MATERIA MEDICA AND THERAPEUTICS (Eclectic)

1. Give clearly and briefly, the indications for two remedies in Influenza. 2. How treat a case of poisoning by carbolic acid? 3. Give indications for use, and dose of Colchicum. 4. Name two saline laxatives, and usual dose. 5. Name the indications and contra indications for Quinine; dosage. 6. Name the conditions in which you would use Gelsemium. 7. What are the physiological effects of Belladonna, Aconite, and Nux Vomica? 8. How treat a case of Rhus poisoning? 9. Give the average dose of morphine, strychnine, cocaine, apomorphia, aspirin. 10. Compare primary and secondary faradic currents.—J. K. S.

### CHEMISTRY

1. What is ethyl hydrate? Give its formula and state how it is produced. 2. Give the composition and properties of chloroform. 3. Give the general properties of alkaloids. 4. (a) State the most common and convenient antidotes for poisoning with mineral acids. (b) State the course to be pursued when the poison to be antidoted is unknown. 5. What are the properties and uses of glucose? State its importance in medical chemistry.—C. E. S.

### PRACTICE

1. Name three forms of epidemic influenza. Give symptoms and treatment. 2. Give symptoms, diagnosis and treatment of chorea. 3. Give the symptoms of impending cardiac decompensation, with the causes, both remote and immediate. 4. Give the symptoms and treatment of acute nephritis. 5. Give symptoms and treatment of acute rheumatic arthritis. What complication is most to be feared, and what prophylactic measure should be advised after recovery, in many cases, to prevent recurrence? 6. Give the differential diagnosis and treatment of pleural effusion. 7. Name some of the clinical manifestations of syphilis of the central nervous system. 8. Give the symptoms and treatment of epilepsy. 9. Give the symptoms and medical treatment of gastric ulcer. 10. Give the treatment of morphine addiction.—S. M. S., J. H. J. U., T. A. McC.

### PATHOLOGY, BACTERIOLOGY, PUBLIC HEALTH AND HYGIENE

1. What is meant by the "types" of pneumococcus? Give the practical significance of each type. 2. Discuss the method and value of anti-typhoid inoculation. 3. Give in detail, with description of organism, the tests and technic of examinations to determine whether patients, both male and female, are free from gonococcus infection. 4. Describe the brain findings in encephalitis lethargica. 5. Give the autopsy find-

ings in influenzal pneumonia. 6. Give the pathology of chronic disease of the tonsils, and the relation of such tonsils to other disease conditions, especially tuberculosis. 7. Give the requirements to be met by a dairy, to be granted a permit to sell milk in a community. 8. Name as many, as you can, of the diseases which should be reported to the health officer. 9. Discuss the regulations, to be enforced by a health officer, in a typhoid epidemic in a town of five thousand inhabitants. 10. What measures would you take to check an outbreak of diphtheria in a school district?—J. H. J. U.

#### SPECIALTIES

1. *Eye*—What is albuminuric retinitis? How should it be treated? 2. *Ear*—What symptoms characterize catarrhal deafness? 3. *Nose*—(a) Describe some of the harmful effects of adenoids. (b) How are adenoids most effectually removed? 4. *Throat*—What are some of the causes of oedema of the larynx? Give treatment. 5. Differentiate—lupus, tertiary syphilis, epithelioma.—S. M. S.

#### OBSTETRICS

1. Describe in detail the management of third stage of labor. 2. What are the varieties of placenta praevia? Give symptoms and treatment. 3. What are the dangers in breech presentation, and how managed? 4. What are the symptoms of impendia eclampsia? Give treatment—(a) prophylactic (b) actual. 5. Give the diagnosis and management of posterior position of a vertex presentation.—L. H.

#### DIAGNOSIS

1. Give differential diagnosis of small-pox and chicken-pox. 2. Make an early diagnosis of pulmonary tuberculosis. 3. Describe hyperthyroidism. 4. Diagnose aortic and acute myocarditis. 5. Describe the early signs of typhoid fever. 6. Differentiate acute appendicitis and calculus in right ureter. 7. Differentiate ectopic pregnancy and ovarian cyst with twisted pedicle. 8. Differentiate cancer of rectum and stricture of rectum. 9. Describe paranoia and dementia praecox. 10. Differentiate acute tonsillitis and diphtheria.—B. McC.

#### PHYSIOLOGY

1. (a) State the average specific gravity of the blood. (b) State some causes of variation in specific gravity. 2. State what are, under normal conditions—(a) the adult pulse rate; (b) adult number of respirations per minute; (c) body temperature; and (d) average respiratory capacity. 3. What changes are produced in the air and in the blood by respiration? 4. Give the number and arrangement of the permanent set of teeth. 5. Discuss briefly the effect of the cooking of food as a means of rendering it more digestible. 6. Give the elementary structure of all secreting glands, and describe the changes that take place during secretion. 7. Give the causes of muscular fatigue. 8. Enumerate the

signs of death. 9. Define myopia, hypermetropia, and astigmatism. State briefly the cause of each condition. 10. Describe the olfactory apparatus. What part of the olfactory apparatus is the seat of smell?—J. K. S.

#### SURGERY

1. Give four important circumstances favoring infection and three most prolific sources of infection. 2. What are Villous Papillomata? Where found most frequently? How treated surgically? 3. Give various steps of surgical procedure in ligation of the brachial artery in the middle arm. 4. Give some common causes of prostatic enlargement with surgical treatment to be employed. 5. What do you understand by the term Hydronephrosis? Give treatment. 6. Give indication for mastoidectomy; describe technique and danger. 7. Describe technique for radical removal of cancer of lip. 8. When is cholecystectomy the operation of choice? Describe technique. 9. What is meant by pre-cancer period? 10. Give diagnosis and treatment of supracondylar fracture of femur.—B. R. McC., C. E. S.

#### ANATOMY

1. Give the origin and distribution of the pneumogastric nerve. 2. Give the number of the cervical vertebrae and mention the marked characteristics of such of these as are in any way peculiar. 3. What is the chief difference between the male and female pelvis? 4. Describe the fallopian tubes; with what kind of epithelium are they lined, and why? 5. Name the tarsal bones and give their articulations.—T. A. McC.

Fourteen osteopaths, seven midwives and three masseurs also appeared for examination, and eleven osteopaths already holding licenses to practice in Ohio were examined in surgery.

#### MISCELLANEOUS BOARD NOTES

A. B. Foster, Cleveland, was arrested and convicted of illegal practice of medicine on May 11th. It being the second offense, he was given a jury trial before Judge Terrell and a sentence of \$500.00 and six months in the workhouse was imposed.

"Dr." Clarmax Gillum (unlicensed), Cleveland, convicted in the Municipal Court of Cleveland, was fined \$100.00 and costs and instructed to leave the city.

Mrs. Erato Zacharatos, Canton, against whom an affidavit was filed in the Probate Court of Stark County on May 4, for illegal practice of medicine, pleaded guilty on May 13 and was fined \$25.00 and costs.

Mike Boldis, Akron, arrested on May 13 for illegal practice of medicine, pleaded guilty before Judge O'Neill in the Municipal Court of Akron and was fined \$100.00 and costs.

George Gueth, Sidney, arraigned before Justice Hess of Sidney under date of May 21st, pleaded guilty to practicing medicine without a license and was fined \$25.00 and costs. Gueth claimed to be a "cancer specialist."



## OHIO HOSPITAL NOTES

One hundred and fifty superintendents and executive officers of hospitals attended the sixth annual convention of the Ohio Hospital Association which convened in Columbus, May 25, for a three-day session. Speakers at the meeting included Drs. A. R. Warner, formerly of Cleveland, now executive secretary of the American Hospital Association with headquarters in Chicago; E. R. Crew, Miami Valley Hospital, Dayton; T. R. Fletcher, chief medical examiner of the Industrial Commission; A. C. Bachmeyer, superintendent of Cincinnati General Hospital; E. A. Baber, superintendent of Dayton State Hospital, and Mr. H. G. Southmayd, chief of the Bureau of Hospitals of the State Department of Health.

The fact was brought out at the Columbus meeting that general hospital facilities in Ohio are insufficient, there being only 2.4 beds to every 1,000 of population. Figures show that 30 counties have no general hospital service and 23 have absolutely none at all. The shortage of nurses and other help and the cost of food and other supplies were among problems considered. The food item, considering initial cost and that of preparation, was declared to enter into the cost of operation to the extent of one-third.

At the final session a resolution was passed dissolving the association as an independent entity and incorporating it as the Ohio section of the American Hospital Association. Another resolution passed concerned the establishment of a new fee schedule for hospitals under the Workmen's Compensation Act. Rates for the new schedule, which became effective July 1, are based on the average daily cost of service per capita, to be determined by the Industrial Commission through investigation with the individual hospital.

Officers elected for the coming year are: president, P. W. Behrens, Toledo; first vice-president, Dr. A. C. Bachmeyer, Cincinnati; second vice-president, Miss Nellie Templeton, Salem; treasurer, Dr. E. R. Crew, Dayton, who formerly served as secretary-treasurer; secretary, F. E. Chapman, Cleveland. Dr. W. F. Marting of Ironton and Rev. M. F. Griffin of Youngstown, the retiring president, are members of the board of trustees.

Massillon State Hospital is destined to become the largest institution of its kind in the country if present plans of the state board of administra-

tion for the erection of additional cottages are carried out. The institution, of which Dr. A. G. Hyde is superintendent, was opened in 1898 and consists of 11 cottages, besides other buildings, including hospital, administration building, superintendent's home, laundry, kitchen, etc. The normal capacity is 1880 patients, but more than 2,000 are now being cared for, of whom a large percentage are foreigners from the surrounding industrial section.

—Petitions for a bond issue of not more than \$1,000,000 to build an Allen County hospital as a memorial to soldiers, were circulated in June and will be presented to county commissioners with a request that a bond issue be submitted to voters in August.

—Recommendations have been made by the Dayton safety director that local hospitals should have their own ambulances for the conveyance of patients, and that such ambulances should be accompanied by an interne when answering emergency calls. Ambulance service is at present operated by the police department.

—A maternity hospital to be known as Chateau Trees Hospital for Better Babies was opened at Brady Lake, Portage County, recently.

—Preparations were under way for the purchase of Marion property to be used as a city hospital when it was discovered that a bond issue of \$200,000 supposed to have been passed last fall for the erection of a hospital had failed to carry by the necessary majority.

—Cleveland has approximately 8,000 insane and feeble-minded in need of hospital care, with no facilities to provide, according to Dr. Thomas W. Salmon, mental hygiene physician for the Cleveland hospital survey. He recommends state provision of 2,000 more hospital beds for the insane; a hospital for feeble-minded with 2,000 capacity; 200 beds at the city hospital for mental and nervous cases; three major mental hygiene clinics at Lakeside and city hospitals, and a down town location.

—The nurses' training class of Toledo Hospital, for whom commencement exercises were held, June 2, was addressed by Dr. J. H. J. Upham, professor of medicine at Ohio State University, and a member of the State Board of Medical Registration.

—Urgent need of increased hospital accommodations in Alliance was discussed at a meeting of 30 local physicians and citizens recently. The 50-bed capacity of the present building, erected three years ago, has continually been taxed, a total of 3,656 patients having been cared for. Addition of a children's ward, a contagious disease ward, and increased accommodations for nurses were recommended.

—Columbiana County commissioners have purchased a farm residence and seven acres of land, west of Lisbon, for a county tuberculosis hospital.

—Columbus hospitals are said to be busier now than they have ever been before despite the fact

that this is normally the slack time of year. Among reasons advanced for the condition are the scarcity of nurses for private duty, and the fact that the public is being educated to the knowledge that better care can be obtained during sickness at a hospital than at home.

—The first psychopathic hospital in the Ohio valley will be established early in July under the direction of Dr. Louis A. Lurie as a part of Cincinnati Jewish Hospital. A building in the rear of the main hospital has been remodeled with funds donated by local citizens for the new department.

—A hospital for students of Dennison University is assured by a donation of \$25,000 from Mrs. C. F. Whisler of Hillsboro.

—Contracts were awarded in May for the construction of the new administration and hospital building at the bi-county tuberculosis sanitarium operated by Montgomery and Preble Counties. Work is already well under way and it is expected the new building will be ready for occupancy in September.

—A social disease clinic for women was opened at Mount Sinai Hospital, Cleveland, June 1. Clinics will be conducted by Dr. J. L. Bubis on three evenings each week.

—Modern Hospital, having outgrown its former quarters at 25 E. Washington Street, Chicago, has removed to its own building at 22 East Ontario Street, which will hereafter be known as The Modern Hospital Building.

## Crippled Children Problem to Be Given Consideration with Prospect of Uniform and Beneficial Administration of New State Law

Members of the Association are interested in a resolution adopted by the House of Delegates at the annual meeting, pledging cooperation in devising uniform plans for the solution of the crippled children problem in Ohio. This resolution, published in the minutes of the second meeting of the House of Delegates on page 530 of this issue, briefly states the purpose for the new committee.

In explanation it may be said that some time ago the legislature authorized a fund of \$90,000 as a preliminary to the establishment of an institution for the care and education of the cripples of the state. Due to the uncertainty of the needs in the various communities, and to the fact that several separate groups and agencies have been working independently toward a solution of the problem, it has been felt that a survey, based on definite and ascertainable facts, supported by uniform and proper recommendations would reach a more permanent and beneficial solution. To this end, a special committee of the Association is cooperating with the Ohio Institute for Public Efficiency.

At a meeting held in Columbus on June 10, under the chairmanship of Dr. A. H. Freiberg of Cincinnati, besides the Institute of Public Efficiency other agencies represented were the State Department of Health, the Board of State Charities, the State Department of Public Instruction, the Ohio Society for Cripples (provided by the Rotary Clubs) and the Ohio State Medical Association.

Plans were outlined and are now being formulated which contemplate central supervision of crippled children including institutional and custodial care when necessary.

As the first step in the comprehensive program an effort will be made to register the crippled children of Ohio. The Bureau of Child Hygiene of the State Department of Health has under-

taken this task with the cooperation of the other agencies mentioned.

Physicians are especially urged to send in all available data on the subject, particularly concerning children who are not at present receiving adequate care. Blanks for this purpose will be obtainable from the various health commissioners, the State Department of Health, or by writing to the office of the State Medical Association. All blanks, when filled out, are to be returned to the Department of Health.

During the last session of the Legislature a bill was passed providing for the medical and surgical treatment of crippled children whose parents or guardians fail or are financially unable to provide such treatment. Under this provision crippled children of this class may be placed under the charge of the Board of State Charities through the juvenile court.

The appropriation for this work is at present very small and insufficient to care for many such cases. Application for treatment may be made to the Board of Charities through the Child Hygiene Bureau of the State Department of Health, with which the Ohio Society for Crippled Children is also working and hopes to care for a number of cases not otherwise provided for.

The new sections of the law, placing indigent cripples in the custody of the Board of Charities, are:

Sec. 1352-8. In order to provide suitable medical and surgical treatment of crippled children whose parents or guardians fail or are financially unable to provide such treatment, the board of state charities is authorized and empowered to receive into its custody such children. Application for such care and treatment shall first be made to the juvenile court by a parent, guardian or some interested person. If such court is of the opinion that such child is in need of such treatment, and finds that the parent or guardian



fails to provide it, he may make an order to that end; or if the parent or guardian is financially unable to pay all or a part of the expense of such treatment, the court shall make a proper finding and decree. In either case the court shall at once forward a copy of the decree and a statement of facts to the board of state charities, and such board shall, when able to do so under this act, accept such child for care as hereinbefore provided. Upon receipt of notice from such board that such child can be given treatment in a suitable institution, the court shall then commit such child to such board and provide for its conveyance in charge of a suitable person to the place designated by such board for treatment. The expenses for conveyance shall be paid by the county or by the parent or guardian as the court may direct. Such commitment shall be only for the period necessary for the treatment of such child.

Sec. 1352-9. The board of state charities shall by contract arrange for treatment of crippled children in any public or private hospital which in its judgment is equipped to give adequate medical, surgical and educational attention to such cases. Compensation for such service, including all surgical and other professional attention, shall be allowed by the board of state charities upon such terms and conditions as may be agreed upon between said board and the hospital admitting such crippled children as herein provided and shall be paid from fund appropriated for such purpose upon vouchers approved by the secretary of said board. Necessary clothes shall be furnished by the board of state charities, but such board may require parents or guardians to pay the state for such expenses when in its judgment such action is just. Such board shall exercise close supervision over such crippled children while patients in such hospitals and may at any time terminate any contracts so made when in its judgment such action should be taken. Each hospital caring for crippled children under this act shall be visited at least once each calendar month by a representative of such board who shall prepare and present to the board a written report concerning the progress of each patient who is being treated in accordance with this act.

Sec. 1352-10. Whenever it appears that a crippled child has been successfully treated, or that it can not be further benefitted by such treatment, the board shall order its discharge and thereupon its guardianship and responsibility shall cease. After such child has been a patient in a hospital in accordance with this act for more than one year the parent or guardian, with the approval of the juvenile court, may cause its release from the hospital and the supervision of the board of state charities.

Sec. 1352-11. After the Ohio institution for the treatment and education of deformed and crippled children is established and ready for the treatment of such children, the board of state

charities may terminate all contracts made under this act and transfer such children under its care to such institution, unless such institution cannot care for all such children who are eligible for admission.

### Small Advertisements of Interest

Stetson hat exchanged from right rear window, Surgical Section, Toledo, 11 A. M., Wednesday, June 2. Initials on band, "O. B. K." Please notify Dr. O. B. Kirkpatrick, Cherry Fork, Ohio.

*For Sale*—\$4,000 village and country practice. With or without home. Electric lights, gas, pikes. Address, W. H., care of *The Journal*.

*Wanted*—Assistant physician at the Ohio Hospital for Epileptics, Gallipolis, Ohio. Single men preferred. Salary \$1320 to \$1800 per year and maintenance. Apply to G. G. Kineon, M. D., Superintendent.

*Wanted*—Locum Tenens for month of August in good location in central Ohio. Can have all you make. Address B, care *The Journal*.

*Wanted*—The following *Medical Journals*, to complete our files for binding: *Journal of the American Medical Association* 1917, Vol. 69, No. 5 Aug. 4) and No. 24 (Dec. 15); *The Laryngoscope*, 1917, No. 3 (March); *Progressive Medicine*, 1919, entire year wanted; *Journal of Laboratory and Clinical Medicine*, Vol. 1, Nos. 2 (Nov., 1915 and 11 (Aug., 1916) Vol. II, No. 1 (Oct., 1916), Vol. III, No. 5 (Feb., 1918), Vol. IV, Nos. 7 (April, 1919) and 10 (July, 1919). *Archives of Neurology and Psychiatry*,—Vol. I, No. 5 (May, 1919). Any one having the desired numbers, which he is willing to dispose of, will confer a favor by communicating with H. S. Jewett, M. D., Librarian, Dayton Medical Library, 303 Fidelity Medical Bldg., Dayton, Ohio.

*Columbus Location for Physician*—General practitioner taking up specialty. Has been in present location more than 20 years. Will introduce new man. A good man need not invest a nickel if he doesn't want to. Nothing to unload. Communicate with Dr. Edward Reinert, 141 N. 20th St., Columbus.

*Locations*—1920 internes looking for locations in which to do general practice may learn of same by addressing Dr. C. S. Ordway, East Side Hospital, 1153 Oak Street, Toledo.

### Northwestern Society Officers

North-Western Medical Association, comprising the Third and Fourth Districts of the State Association, announces the election of the following officers: President, A. S. McKittrick, Kenton; first vice-president, F. L. Bates, Lima; second vice-president, I. N. Zeis, Carey; secretary, Wilson C. Pay, Bellefontaine; assistant secretary and treasurer, R. J. Morgan, Van Wert. Drs. R. R. Hendershott of Tiffin and John G. Keller of Toledo are councilors of the society.

# MEDICAL COMMENT ABSTRACTS AND CURRENT TOPICS OF INTEREST

THE PUBLICATION COMMITTEE IS MORE THAN ANXIOUS TO MEET THE NEEDS OF THE JOURNAL'S READERS. IN CONSEQUENCE THE MEDICAL EDITOR IS INITIATING A NEW DEPARTMENT TO BE DEVOTED TO MEDICAL COMMENT, ABSTRACTS, AND CURRENT TOPICS OF INTEREST TO THE GENERAL PRACTITIONER. THE EDITORIAL POLICY OF THIS NEW DEPARTMENT WILL BE ONE OF SERVICE AND SUGGESTIONS AND CONTRIBUTIONS WILL BE GRATEFULLY RECEIVED.—MCM.

## The Importance of Blood Pressure Observation in Surgical Prognosis

**S**PEAKING before the Providence, R. I., Medical Association, Albert H. Miller, president of the American Association of Anesthetists, drew attention to the fact that the blood pressure is the most valuable single means at the disposal of the surgical team for making a pre-operative prognosis and for judging the condition of the patient during and after operation. It may uncover arteriosclerosis, nephritis, myocarditis, aortic insufficiency, or mitral stenosis. It registers the ability to withstand hemorrhage, the depression of the anesthetic and surgical shock. Publishing his conclusions in the *Boston Medical and Surgical Journal*, 1919, Miller contends that in the present advanced state of surgical knowledge, the patient has a right to expect a fairly exact pre-operative diagnosis and a very exact pre-operative prognosis. The surgeon who makes and records a prognosis before each operation and checks up his pre-operative opinion with the result will rapidly gain in skill in this important department.

Miller classifies his cases into good, fair and poor risks. *Good risks*,—patients free from organic disease, whose surgical condition is not likely to prove fatal,—are expected to recover. If a fatality occurs in this class of patients, the case should be carefully gone over to determine if the pre-operative prognosis was in error or the work of the surgical team to blame for the fatality. In *fair risks*,—patients suffering from organic disease, but whose surgical condition is not specially serious, if no examination and no prognosis has been made, the necessity for a lame explanation of a fatality,—for instance fatal diabetic coma after appendectomy,—is most deplorable. In *poor risks*,—patients whose surgical condition is so serious or so far advanced as likely to result in fatality, recovery may be unlikely without operation, and the prospect of death should be anticipated by due warning.

In a series of 1000 consecutive operations, studied under this classification, Miller found the following results:

	Class 1	Class 2	Class 3	Total
Cases .....	734	179	87	1000
Deaths .....	2	14	29	45
Percentage .....	.27	7.82	33.33	4.5

The deaths recorded occurred in from 24 hours to 3 weeks after operation. No deaths took place

during or immediately following operation. Measured measure of anesthesia were used by Miller exclusively.

To determine the accuracy of *Moots' rule*:—that if the pressure ratio (representing the relationship existing between the kinetic energy expended by the cardiac contraction in moving the blood column and the potential energy stored in the arterial walls and columns of blood which they contain), lies between 25 and 75 per cent, the case is probably operable, if outside these limits, probably inoperable,—Miller investigated his series of 1000 cases and tabulated the results. According to Moots' rule 3.23 per cent. of the operable cases died and 96.77 per cent. recovered. Of the inoperable cases 23.07 per cent died and 76.93 per cent. recovered. Some of the cases classed as inoperable underwent minor operations safely, and some of those classed as operable died after very serious operations and under circumstances which could not have been readily predicted. On an average, Miller believes that his results show the great value of Moots' rule in surgical prognosis.

*McKesson's rule*:—that after a half-hour of sustained low blood pressure and rapid pulse, almost every patient succumbs either shortly or within three days of surgical shock and heart exhaustion,—was put to a similar test. In a considerable number of cases shock (characterized by a diastolic pressure of 80 mm. or less, a pulse pressure of 20 mm. or less and a pulse rate of 120 or more), was reported by Miller to his surgeons and the operation rapidly completed. All of these patients recovered. Thirteen of the patients were in the danger zone from 25 to 70 minutes. Of these 9 died, giving a mortality rate of 69.23 per cent. These figures certainly indicate the great value of McKesson's rule for determining shock during operation.

Both rules, according to Miller's conclusions, are trustworthy and valuable aids and should be routinely employed.

## Standardizing the Conception of Cardio-Vascular Depression

**S**PEAKING before a joint meeting of the American Association of Obstetricians and Gynecologists and the Interstate Association of Anesthetists, at Cincinnati, September 15, 1919, Drs. Charles W. Moots and E. I. McKesson



emphasized the fact that cardio-vascular depression being the outstanding symptom of the condition known as shock, it is reasonable to start with the proposition that whatever means enable us to determine the very beginning of this condition is of the greatest importance. These authorities hold that:

"When a cardio-vascular system is reacting normally, an increased pulse rate is accompanied by an increased systolic and diastolic blood pressures, and vice-versa. The pulse pressure is roughly half as great as the diastolic pressure and is the most direct evidence we have of the amplitude of the heart contraction, the best evidence of effective blood movement. In normal sleep, the pulse rate and blood pressures are lowered but their normal relationships are maintained; so are they in an ideal anesthesia.

"But during surgical operations, so many factors enter to disturb the normal reaction of the circulation that we may have many combinations, with almost never a true stimulation, but very frequently a depression of the circulatory system. The changes occur so frequently with sometimes disastrous and sometimes innocent results, that it is most desirable to be able to differentiate between them and to anticipate their onset.

#### BLOOD PRESSURE RULES

"**T**HERE is no form of anesthesia, there is no age of patient, there is no type of operation in which one expects to see an elevation of blood pressures during the operation. Our fears are from low blood pressures, rapid pulse rate, and heart fatigue.

"Circulatory Depression or Decompensation is best divided for surgical operation into three degrees:

"1. *Safe.* 10 to 15 per cent. increase on pulse rate without change in pressure. 10 to 15 per cent. decrease in blood pressures without change in pulse rate.

"2. *Dangerous.* 15 to 25 per cent. increase in pulse rate with 15 to 25 per cent. decrease in blood pressures.

"3. *Fatal.* Progressively increasing pulse rate above 100 with progressively falling blood pressures of 80 or less systolic and 20 or less pulse pressure, for more than 20 minutes.

"The first degree is never fatal but may gradually merge into the second degree. The second degree, beginning shock, may be regarded as dangerous in the sense that it exhausts the heart and disarms it for defense against continued low blood pressures.

"The third degree is always dangerous to the life of the patient. A vicious circle is established consisting of the low blood pressure, the reduced heart nourishment which in turn still further reduces the blood pressure, and so on progressively. This usually develops within 20 minutes after the third degree depression occurs and when once well established proves fatal at once or at most within three days. The time in which shock proves fatal depends upon the cardiac muscle reserve and the effectiveness of the treatment employed. Third degree depression may be present in a patient without the usual alarming signs, but after the vicious circle becomes established, evidences of shock become well marked.



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DETROIT

## VALUE OF BLOOD PRESSURE READINGS

“WITH the palpating finger, no matter how skilled, one cannot determine all the characteristics of the pulse or the pulse pressures with sufficient accuracy to be of much prognostic value as to the onset and degree of circulatory depression during a surgical operation.

“Blood pressures and pulse determinations every few minutes during all of the more serious operations as well as in many of the so-called minor cases are a part of the duties of every anesthetist. The information regarding the patient's fitness for the operation, his reaction to certain procedures and the immediate prognosis can be gained in no other way with the same degree of accuracy.

“The procedure is made convenient and easy by fastening the blood pressure cuff to the right arm and snugly binding the stethoscope below it with elastic webbing. Readings can then be made at will without disturbing sterile sheets and without losing the continuity of anesthesia.

## PRESERVING MUSCLE TONE

“A SUITABLE graphic chart is preferable as a record because the tendencies of the circulation are readily compared from time to time and because the prognosis based upon these tendencies and the character of operative work to follow, can be more accurately made.

“Where nitrous oxid-oxygen was available in skilled hands the war has corroborated our previous observations that this form of narcosis is one of the best shock prophylactics we have.

“It is not remarkable that nitrous oxid-oxygen should be safer in shock and in preventing shock than other anesthetics when one recalls the fact that muscle cannot be paralyzed with it.

“The greatest responsibility of the anesthetist is to avoid relative over-dosing of the patient in an effort to please the surgeon who may be demanding a flabby musculature.

“The relaxation is not confined to striated muscles of the abdomen and extremities, but extends to the striated muscle of the heart. The effect is at once reflected by the pulse pressure and if pushed too far the diastolic pressure is also decreased showing the action upon smooth muscle as well.

“The clinical study of blood pressure has convinced us that the final factor in shock is muscular exhaustion or an interference with muscular action. One thing is most apparent, the average patient having been profoundly anesthetized for extreme relaxation, is half shocked, a second degree depression, and it often takes but little trauma to complete the picture of third degree depression.”

In this connection it is interesting to report that all the members of the Toledo Society of Anesthetists have adopted this standardized conception of cardio-vascular depression and are using it graphically on their charts. Their records when compiled should develop some valuable and original information.

## MEETINGS OF THE CLEVELAND ACADEMY OF MEDICINE

(Lester Taylor, M. D., Secretary)

The 162d regular meeting of the Academy of Medicine of Cleveland was held May 28, in the Auditorium of the Cleveland Medical Library, the president, Dr. R. H. Birge, in the chair.

The program for the evening was presented by Dr. Thomas W. Salmon, Medical Director of National Committee for Mental Hygiene, whose subject was “What a Psychiatric Clinic can do for Cleveland.” Dr. Salmon discussed the position that psychiatry has always held in relation to general medicine and also its close association with the law. He emphasized the extreme importance of this group of mental cases, both numerically and otherwise and showed that 38% of all cases under Public Health Service are mental or nervous. He grouped his cases in four classes: first, the insane; second, those mentally deficient; third, the psychoneuroses; and fourth, persons who are in need of mental training. The lack of proper interest by doctors was deplored and the importance of army experience in showing the value of psychiatric clinics was emphasized.

Dr. Salmon then took up the deplorable local conditions in Cleveland and outlined briefly what our needs are. He felt that we should have a psychopathic hospital, in charge of a special director and special teachers to plan the work. There should be a training school for psychiatric nurses and in connection with the hospital an out-patient department and a social service department. He felt that the problem lay in the hands of the doctors rather than the lawyer, because 50% of all psychiatric cases were curable and if given humane and hopeful care would furnish practical opportunity for extending the influence of the medical profession.

Attendance 47.

## COUNTY SOCIETIES

### FIRST DISTRICT

Adams County Medical Society had a very successful meeting with nine of its 17 members present at West Union on April 9. Dr. J. Louis Ransohoff of Cincinnati was the guest of the occasion and spoke on “Cancer.”—O. T. Sproull, Secretary.

### THIRD DISTRICT

Allen County Medical Society held its regular bi-monthly meeting at the Elks' Home, Lima, May 18, with 30 members in attendance. Dr. J.



**The  
Management  
of an  
Infant's Diet**

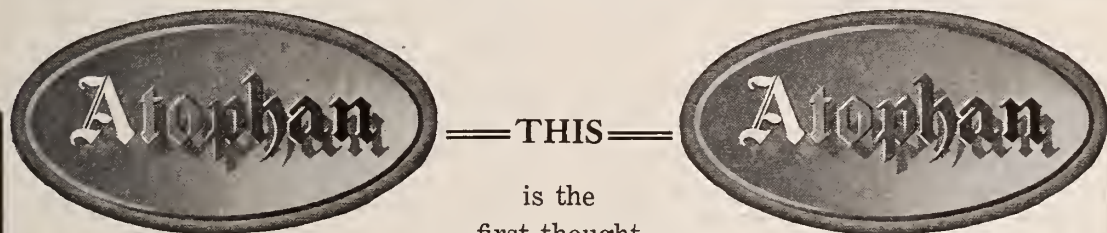
## DIARRHEA

The importance of nourishment in intestinal disturbances that are so common during the warm weather is now recognized by physicians, and it is also appreciated that the nutrition furnished must be somewhat different than the milk modification usually supplied to the normal infant.

Food elements that seem to be particularly well adapted, mixtures that are suitable to meet the usual conditions, and the general management of the diet, are described in our pamphlet—"The Feeding of Infants in Diarrhea"—a copy of which will be sent to any physician who desires to become familiar with a rational procedure in summer diarrhea.

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C. Bradfield presented a paper on "Rickets, as Observed Among the Laity," which was thoroughly discussed. After the scientific program there was a social session and a well arranged banquet. The committee on fee schedule made the following report which was adopted by the society: Office calls, \$1.50 up; day visits, \$3.00; night visits (8:00 p. m. to 7:00 a. m.) \$5.00; \$5.00; obstetrical cases, \$35.00; anesthetics, \$15.00; consultation, \$10.00.—A. S. Rudy, Correspondent.

#### FIFTH DISTRICT

*Geauga County* Medical Society held its first meeting of the year at Burton on June 10, with a good attendance. Dr. H. A. Berkes of Cleveland was the essayist of the meeting and read an excellent paper on "High Blood Pressure and Its Relation to Diseases of the Kidney." Plans were made at this session for a county public health meeting, to which the laity will be invited and which will be addressed by Dr. F. E. Bunts of Cleveland on the subject of "Cancer."—Isa Teed-Cramton, Secretary.

#### SIXTH DISTRICT

*Summit County* Medical Society had a rousing meeting on the evening of June 8, when attendance numbered 110 members and guests, including Summit County nurses. Four physicians were elected to membership and three applications received. Mr. W. H. Weiss, revenue collector of the eighteenth district, explained alcoholic and narcotic regulations as they affect physicians and nurses. Mr. R. G. Paterson of local Red Cross organization, outlined the future program. Resolutions of condolence and sympathy for the families of Drs. H. D. Todd and J. T. Growdon, who died in May, were adopted. Dr. D. H. Morgan, delegate to the 1920 state meeting, gave an extensive report on the Toledo session. After an announcement of the date of the annual picnic in August the society adjourned until September.—U. D. Seidel, Secretary.

#### SEVENTH DISTRICT

*Jefferson County* Medical Society met in regular monthly session at Steubenville, June 8. Following lunch at the Y. M. C. A. the members who attended the Toledo state meeting made reports and Dr. A. E. Weinstein spoke on "The Operative Treatment of Goitre." Dr. L. R. Cranmer opened the discussion on Dr. Weinstein's paper.—J. R. Mossgrrove, Secretary.

*Tuscarawas County* Medical Society met in joint session with the county dental society at New Philadelphia on May 13. The program consisted of papers by Dr. F. B. Larimore on "The Oral Cavity in Relation to the Ear, Nose and Throat," and Dr. George Collins on "Dental Infections."

Meeting in Uhrichsville, June 10, the society enjoyed an illustrated lecture by Dr. Thrush of Uhrichsville, on "Diseased Conditions of the Gastro-Intestinal Tract as Revealed by the Roentgen Ray." The delegate to the state meet-

ing gave a report of the proceedings.—E. D. Moore, Secretary.

#### NINTH DISTRICT

*Scioto County* Medical Society held its regular monthly meeting in Portsmouth on May 10. Red Cross workers gave a report of work done in the county and members of the society voted to give their services free to cases brought to them by the Red Cross nurses for treatment. Dr. W. E. Gault presented an interesting paper on "Sore Throat."—H. F. Rapp, Secretary.

#### Ohio Clinical Society Organized

With the object of extending the activities of the American College of Surgeons in Ohio, Dr. Franklin Martin of Chicago, secretary general of the Clinical Congress of the organization, met with a group of Ohio Fellows of the College in Cincinnati on May 6 and organized the Ohio Clinical Society of the College of Surgeons. Drs. Charles W. Moots of Toledo and J. Edward Pirrung of Cincinnati acted as temporary chairman and secretary, respectively, of the organization meeting.

The formation of an Ohio branch of the Clinical Congress is in accordance with a resolution adopted by the Board of Regents of the American College of Surgeons, providing for the organization of clinical meetings in the various states of the United States and in the provinces of Canada. The object is the organization of state and provincial clinical meetings along the lines of the annual Clinical Congress of the American College of Surgeons, each section to hold an annual meeting within that state or province at some convenient time during the year.

The Ohio branch decided to hold its first clinical meeting at Cleveland in the early spring of 1921. Dr. George W. Crile of Cleveland has been appointed chairman of the committee on arrangements for this occasion. It is proposed to have a two-day session, limiting attendance to Fellows of the College and invited guests, or to surgeons or specialists eligible to membership in the College and subscribing to the code of ethics laid down by the American College of Surgeons.

It should not be understood that the new branch society supplants in any way the activities of the national organization, it is merely supplementary. The great extensiveness of the national Congress now permits only a limited number of cities to entertain the membership. Under the new plan closer contact in clinical and hospital work will be possible and each Fellow will be enabled to become familiar with the work of his neighbor, thereby promoting the elevation of the practice of surgery, the standardization of hospitals and the prevention of unnecessary surgery through higher and more practical education of surgeons.

Officers of the new Ohio Clinical Society, elected at Cincinnati, are: Dr. Charles S. Hamilton of Columbus, president; Dr. J. Edward Pirrung of Cincinnati, secretary, and Dr. Walter H. Snyder of Toledo, counsellor.



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# Occupational Diseases---Why Should Physicians Be Required by Law to Report Them?

E. B. Starr, M. D.,

Director, Division of Industrial Hygiene, State Department of Health.

**O**CCUPATIONAL Diseases—(1) What are they? (2) Are they of recent origin and what is their significance? (3) Why should society be concerned about them? (4) Why should physicians be required by law to report them?

The first question may be answered by the following definition: Occupational diseases are maladies due to specific industrial poisons, mechanical irritants, physical and mental strain or faulty environment, associated with specific conditions of labor.

Occupational diseases may be acute or chronic, may occasionally cause sudden death though more commonly result in subacute or prolonged illness and incapacity for efficient work. They may furthermore form the basis for the development of other diseases of grave prognosis.

The question of occupational diseases is not of recent origin. On the contrary diseases peculiar to occupation have claimed the serious attention of some of the ablest men in the annals of medicine, including Hippocrates and Galen. Toward the close of the seventeenth century a systematic treatise on "Diseases of Occupation" was written by Professor Bernado Ramazzini of the University of Padua, Italy. Two copies of this interesting volume now reside in the Surgeon General's Library at Washington.

To gain an adequate conception of the significance of occupation as a factor in the causation of disease one needs only to review the progress of events which lead to the rise of modern cities and the relative depletion of rural districts; to review the changes wrought in methods of production since the substitution of steam for water power and of machine manufacture for handicraft; to review the history of labor legislation designed in the main to protect the life and health of the laboring classes from conditions associated with factory life. Suffice it to state that less than a century ago the average age of the laboring classes was little more than half that of the higher classes and the death rate almost twice as great.

In the interest of humanity and as a matter of social justice it became necessary to study the so-called dangerous trades in order to determine the causes that were undermining the health of these people.

Fortunately great progress has been made, especially since the enactment of legislation regarding the hygiene and sanitation of workshops and factories. Some of the industrial diseases have been practically eliminated, such as "phossy jaw" or phosphorus necrosis and many

others have been greatly reduced both in frequency and severity. On the other hand many new substances introduced into industry are responsible for new problems in disease prevention.

That the problem of occupational or industrial disease is by no means solved is evidenced by the fact that workmen in many of the trades are subject to extra premium charges in the purchase of life insurance and many others cannot buy life insurance at all, because of the health hazardous or life hazardous character of their occupation. The mortality in many of the trades is distinctly higher than that prevailing in the same age groups of the general population. The health hazards associated with many of the trades predisposes to a high incidence and death rate from tuberculosis and in other trades to pneumonia and other diseases seldom thought of in connection with occupation. In a recent study of the mortality from influenza-pneumonia among bituminous coal miners of Ohio, I found the death rate from this cause in 1918 to greatly exceed that among males of the state at large.

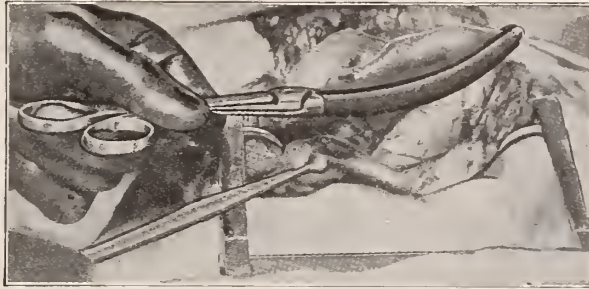
Why then should society be concerned with the health of industrial workers? Because the health of every individual, and particularly of industrial workers is an affair of the state, since his dependency, should it occur, becomes a burden upon the state, directly or indirectly. It is likewise a matter of economic importance to society that each individual, especially in these times, should not have his working efficiency impaired by preventable diseases.

*Why should physicians be required to report occupational diseases?* Physicians have long since recognized the importance of reporting communicable diseases as a first step in the public control of such diseases. The physician being the first to be consulted by the sick workmen may come into possession of information essential to the investigation and control of the particular disease. The workman himself is often ignorant of any dangers inherent in his occupation and may be powerless to correct the causative condition even though he knows of it. It was early recognized that in the interest of humanity the physician should withhold no facts that might lead to the improvement of working conditions and the prevention of disease. A prerequisite to the control of any disease whether communicable or occupational, is that we must know when, where and under what conditions cases are occurring.

England, France and Germany have for many years had laws requiring physicians to report occupational diseases. In 1913, the Ohio legisla-



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ture passed a law requiring the reporting of poisoning by lead, phosphorus, arsenic, brass, wood alcohol, mercury and their compounds, anthrax and compressed air illness. Since the enactment of this law the Public Health Council has required in addition the reporting of poisoning by anilin, benzine, benzol, bisulphide of carbon, carbon monoxid, dinitrobenzol, naphtha, natural gas, turpentine, etc., besides the reporting of any other diseases or poisoning that may be reasonably attributed to peculiarities of occupation.

Many occupational diseases are more amenable to control than are communicable diseases, others cannot be controlled till we know more of the facts concerning them and the conditions that cause them.

The increasing complexity of industrial life places upon every physician and the state definite responsibilities. So broad is the scope of the problem of industrial diseases that special textbooks are now devoted to a discussion of the subject.

With the development of the chemical industry in this country since the war, new problems have arisen. Industrial processes are subject to constant changes and it is necessary that we should have an effective index to the reaction of these processes on the health of the workmen. New protective devices must be applied and other preventive measures taken. Another problem is created in the advent of women into industry. It has been shown that the mortality among infants of women employed in industry is 50 per thousand in excess of that among infants born of non-industrially employed women.

Heretofore we have been dependent on mortality statistics for an index to the healthfulness of various trades. It is within the power of the medical profession to give us a *morbidity index* which would prove far more valuable in the control of working conditions and in addition would reflect great credit on the public spirit of the medical profession of Ohio.

### Convalescent Members

*The Journal* learns with gratification of the recovery from recent illnesses of Dr. A. D. Warner of Burton and Dr. F. S. Pomeroy of Chardon, pioneer members of the Geauga County Medical Society. Both of these men have served the people of their community for many years and have done much for the local medical society. Dr. Pomeroy served as a member of the draft board during the World War, and during the influenza epidemic did valiant service, working beyond his strength.

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## DEATHS IN OHIO

*Valentine Winters Anderson, M. D.*, Louisville (Kentucky) National Medical College, 1900; Michigan College of Medicine and Surgery, 1904; aged 50; died at his home in Dayton, May 10, from cerebral hemorrhage.

*Rufus Walter Athey, M. D.*, Cleveland College of Physicians and Surgeons, 1890; aged 56; member of the Ohio State Medical Association and Fellow of the American Medical Association; died June 5, from pneumonia, following an operation for appendicitis which he underwent ten days prior. Except for seven years in which he practiced at Barlow, Dr. Athey had spent his entire medical career in Marietta, where he was interested in the operation of a private hospital. He leaves a widow and an adopted son.

*Horace Greely Boynton, M. D.*, Starling Medical College, Columbus, 1888; aged 62; died at his home in Columbus, May 22.

*Milton G. Conger, M. D.*, Miami Medical College, Cincinnati, 1890; aged 51; died at his home in Cincinnati, May 18, from pneumonia. He is survived by his widow and one daughter.

*Harry A. Cosler, M. D.*, Ohio Medical Univer-

sity, Columbus, 1902; aged 47; member of the Ohio State Medical Association; died at his home in Fairfield, May 13, after a brief illness. Dr. Cosler was a native of Greene county and spent his entire medical career there. Surviving are his wife and one daughter.

*Charles F. Cushing, M. D.*, Western Homeopathic College, Cleveland, 1861; aged 90; died at his home in Elyria, May 3, from pneumonia. Dr. Cushing was the dean of the Medical fraternity in Lorain County, having taken up practice in Elyria immediately after his graduation. For many years he was a member of the staff of Elyria Hospital, and took an active interest in civic affairs. Dr. Cushing was a veteran of the Civil War. One son, Dr. Charles H. Cushing, survives.

*Thomas W. Duvall, M. D.*, Medical College of Ohio, Cincinnati, 1886; aged 56; member of the Ohio State Medical Association; died at his home in Lynchburg, May 21. Dr. Duvall had practiced in Highland County continuously since his graduation, spending the last 30 years in Lynchburg. He leaves a widow, two brothers and one sister.

*Marion Dexter Follin, M. D.*, Cincinnati Medical College, 1892; aged 53; died in Lakeside Hospital, Cleveland, May 23, of Bright's Disease. Dr. Follin's home was at Johnsville, where he had resided for more than 20 years.

*Amos F. Green, M. D.*, Starling Medical Col-

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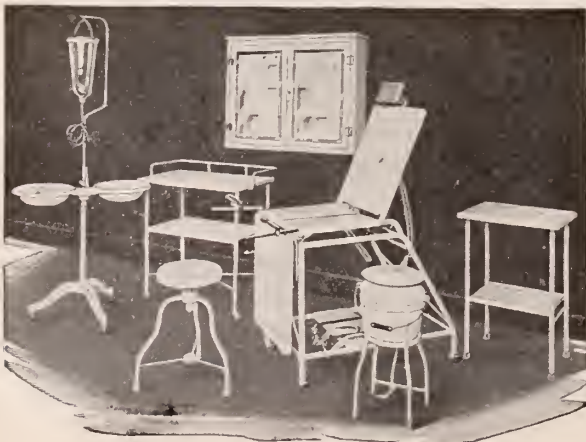


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lege, Columbus, 1894; aged 61; member of the Ohio State Medical Association; died at his home in West Jefferson, May 23, from acute nephritis. Dr. Green had practiced in West Jefferson since 1905. He held numerous public offices, among them being the office of mayor, county coroner and member of the school board. His wife, a daughter, one brother and two sisters survive.

*James T. Growdon, M. D.*, Kentucky School of Medicine, Louisville, 1894; aged 53; died at his home in Akron, May 9. Dr. Growdon was a native of Ross County. He located in Akron in 1916. Surviving are his wife, two sons and five daughters.

*Walter S. Hatfield, M. D.*, Hahnemann Medical College and Hospital of Philadelphia, 1882; aged 66; died at his home in Cincinnati, May 25. Dr. Hatfield practiced medicine in Covington for 25 years, and for the last eight years in Cincinnati. His widow and two sons, one of whom is Dr. Walter H. Hatfield of Cincinnati, survive.

*William H. Herrick, M. D.*, Western Reserve University School of Medicine, Cleveland, 1866; aged 76; former member of the Ohio State Medical Association; died at his home in Cleveland, May 28. Dr. Herrick practiced in Cleveland for many years but had been in ill health for two years and retired one year ago. He was a veteran of the Civil War.

*Milton Hopper, M. D.*, Medical College of Ohio, Cincinnati, 1881; aged 53; died at his home in Cincinnati, May 10. Dr. Hopper was formerly a resident of Cherry Grove, Ohio.

*Thomas Henry Landor, M. D.*, McGill University, Montreal 1884; aged 57; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Canton, May 6, from hypertrophy of the liver, and gastric ulcer. Dr. Landor came to Canton thirty years ago. He enlisted in the Army at the outbreak of the Spanish-American War, served in the campaign in Cuba, and later spent ten years in the Philippines as a captain in the regular army, returning to Canton at the end of his service. Besides his wife, he is survived by a brother and five sisters.

*Abram W. Mardis, M. D.*, National Normal University, College of Medicine, Lebanon, 1890; aged 57; former member of the Ohio State Medical Association; died in a Hamilton hospital, May 2. Dr. Mardis's home was at Lebanon, where he practiced his profession for many years. He served for a number of years as a member of the board of trustees of the National Normal University. He leaves a son and four brothers.

*William L. McGrew, M. D.*, College of Physicians and Surgeons, Baltimore, 1890; aged 73; died at his home in Warren, April 21. Dr. McGrew was also a clergyman of the Methodist Episcopal Church.

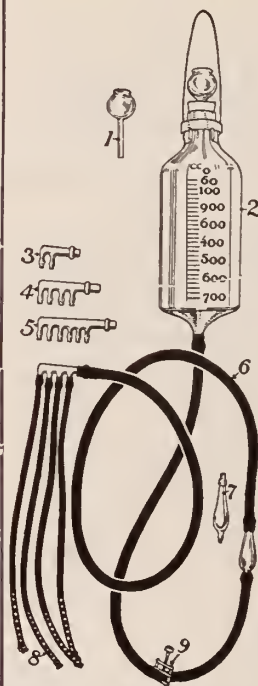
*Stephen C. Priest, M. D.*, Eclectic Medical College of Pennsylvania, Philadelphia, 1869; Cincinnati College of Medicine and Surgery, 1877;

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Gentlemen:—Your very kind notice advising Dr. \_\_\_\_\_ that the suit in re \_\_\_\_\_ vs. \_\_\_\_\_, has been dismissed upon the motion of the attorney for the Protective Company, and that this proceeding closes this suit, has been very thankfully received by his widow and administratrix, the writer thereof. I feel it to be a full vindication of the Doctor and relieves my mind very much, my only regret being that Dr. \_\_\_\_\_ did not live to hear the verdict. I am sure that he would have appreciated your efforts in his behalf, and I thank you very, very much for the result.

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aged 73; member of the Ohio State Medical Association; died at his home in Newark, May 31, from paralysis. He is survived by his wife and five children.

*Aloysius Peter Renneker, M. D.*, Medical College of Ohio, Cincinnati, 1879; aged 65; member of the Ohio State Medical Association; died at the home of his son in Cincinnati, June 4, after a long illness. He had been practicing in Cincinnati for 41 years. Besides his widow, two sons, Drs. A. F. Renneker and L. G. Renneker, both of Cincinnati, and three daughters survive.

*Rudolph R. Seidel, M. D.*, Western Reserve University School of Medicine, 1893; aged 52; member of the Ohio State Medical Association; died in St. Alexis Hospital, Cleveland, May 5, from a fractured skull suffered when he was struck by an interurban car in Bedford, April 21. Dr. Seidel's home was in Bedford. He leaves his widow and two daughters.

*Harry Dushane Todd, M. D.*, Eclectic Medical College, Cincinnati, 1898; aged 44; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Akron, May 25, from heart disease. Dr. Todd was born in Springfield, where he received his early education and graduated from Wittenburg College. He had made his home in Akron for 18 years. He was secretary of the Summit County Medical Society in 1909, and served as police surgeon during 15 of the 18 years in which he lived in Akron. His widow and two children survive.

#### FORMER OHIOANS SUCCUMB

*Theodore F. Bliss, M. D.*, Geneva Medical College (University of Syracuse), 1869; aged 77; a former member of the Ohio State Medical Association; died at the home of his son in Lansing, Michigan, May 29, from cerebral hemorrhage. Dr. Bliss practiced his profession in Springfield, Ohio, for 36 years, retiring one year ago on the completion of 50 years of active practice. He is survived by two sons, Dr. Chester B. Bliss of Sandusky and Charles L. Bliss, chemist to the Michigan Department of Health.

*William Pollock Crumbacker, M. D.*, Medical College of Ohio, Cincinnati, 1882; aged 63; died of pneumonia, May 11, at the Iowa State Hospital, Independence, Iowa, of which he had been superintendent for 18 years. Dr. Crumbacker practiced in Antrim, Ohio, for a number of years and was well known throughout Guernsey County. Before moving to Iowa he was superintendent of the West Virginia State Hospital and was connected with several Ohio institutions.

#### Books Received

MANUAL OF PSYCHIATRY, edited by Aaron J. Rosanoff, M. D., Clinical Director, Kings Park State Hospital, N. Y., Lieutenant Colonel, Officers' Section, Medical Reserve Corps, U. S. Army. Fifth Edition, revised and enlarged. Price \$4.00. John Wiley & Sons, Inc., New York.

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## Ohio Public Health Association Supersedes Anti-Tuberculosis Society and Health Commissioners Organize

Unlimited enthusiasm in health activities under the new health code was expressed at the First Conference of Ohio Health Commissioners in Columbus on May 12, 13 and 14, in the large attendance of health workers from throughout the state and the interesting program presented. The opening session was addressed by Governor Cox, Health Commissioner Freeman and Dr. George D. Lummis of Middletown, chairman of the Ohio Public Health Council. Other sessions were devoted to the milk question, to health administration problems in the city and county districts and to the consideration of a new sanitary code.

The outstanding development of the conference was the organization of the Ohio Public Health Association to back up local and state public health officials in their task of making Ohio a better place in which to live. The new association takes the place of the Ohio Society for the Prevention of Tuberculosis and has for its objects (a) the promotion of the organization and work of local public health leagues in all parts of Ohio; (b) the dissemination of knowledge concerning the prevention of disease with particular reference to the prevention of tuberculosis; (c)

the encouragement and support of organized official work for the prevention of disease with particular reference to the prevention and scientific treatment of tuberculosis, and (d) the securing of proper legislation for the prevention of disease.

The humanitarian spirit and objects of the organization were indorsed by the Ohio State Medical Association at its recent meeting in Toledo through the action of its House of Delegates in passing a resolution pledging cooperation and authorizing the president to appoint two representatives as nominees for the board of trustees of the new health association. These appointees will be announced in a later issue of *The Journal*.

Heading the health association is Dr. C. B. Bliss of Sandusky as president; other officers are Dr. L. G. Locke, Portsmouth, and Mrs. W. C. Marshall, Selma, vice-presidents; Robert G. Paterson, Columbus, secretary; T. S. Huntington, Columbus, treasurer; C. L. LaMonte, Columbus, auditor, and Drs. R. H. Bishop, Cleveland, A. C. Bachmeyer, Cincinnati; Mr. D. F. Garland, Dayton, and Mrs. Neal Waddell, Greenfield, members of the executive committee.

During the Columbus conference city and gen-

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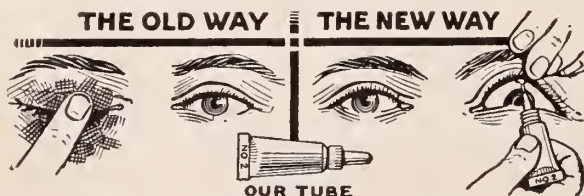
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eral district health commissioners perfected separate organizations for the purpose of further systematizing their work. These associations held their first official sessions during the annual meeting of the Ohio State Medical Association in Toledo in June, in connection with the Section on Hygiene and Sanitary Science.

Dr. William H. Peters of Cincinnati is president of the city commissioners' organization; Drs. John A. Kappelman of Canton, O. J. Tatje and H. J. Powell of Bowling Green, first, second and third vice-presidents, respectively, and Dr. R. R. Richison of Springfield, secretary-treasurer. The constitution of the association states that its purposes are the promotion of public health work in city health districts; cooperation between the state department of health and the organization, and the securing of public support of proper legislation pertaining to public health, the prevention or restriction of disease, and the prevention, abatement or suppression of nuisances.

Officers of the General District Health Commissioners' Association are: Dr. D. D. Shira of Akron, president, and Dr. G. E. Robbins of Chillicothe, secretary-treasurer.

At the Toledo meeting city health commissioners engaged in a consideration of standard methods in the enforcement of milk and dairy regulations, and the interpretation of the new regulations for the control of communicable diseases. Following extensive discussion the sanitary code presented by State Health Commissioner Freeman at the previous conference in Columbus was indorsed. It has since been adopted by the Ohio Public Council and filed with the secretary of state, and became effective as law on July 1.

The provisions of the new sanitary code will be published in the August issue of *The Journal*. Briefly, it contains regulations governing the reporting of notifiable disease in the state, naming the ailment according to its classification as a dangerous disease, and stating who is responsible for the reporting of it. It includes provisions for notification of such diseases as are found in institutions and for the reporting of deaths from notifiable diseases to the State Department of Health. Necessary measures for the prevention and control of communicable diseases, such as quarantine, isolation of exposed persons and proper disinfection are embodied in the new code, as are regulations for the transportation of the dead and for the inspection and examination of school teachers, janitors and children. The maintenance of a sanitary control of the state park sanitary districts, the construction of sewage disposal plants, the removal of garbage and the protection of food from flies and dust constitute a section of the new code.

Eucatrophine-Werner.—A brand of eucatrophine complying with the N. N. R. standards. Werner Drug & Chemical Company, Cincinnati, Ohio (Jour. A. M. A., May 1, 1920, p. 1231).

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## NEWS NOTES OF OHIO

**Warren**—Dr. Edward C. Goldcamp, a former resident of Youngstown, having completed a post-graduate course in eye, ear, nose and throat in New York, has opened offices in the Packard Apartments, this city.

**Somerset**—Dr. James C. Fountain has been appointed Perry County examiner and physician for the War Risk Insurance Bureau by the United States Public Health Service.

**Dayton**—The Ohio Eclectic Medical Society, closing a three-day convention here, May 21, voted to hold its 1921 meeting in Columbus, May 18-19. Dr. W. E. Lehr of Arlington was elected president, and Dr. J. F. Wuist of this city, secretary.

**Columbus**—James F. Rauschkolb, son of Dr. John Rauschkolb of this city, died, June 5, after a brief illness.

**Marion**—Dr. Elmer E. Lynch has moved to this city from Mt. Victory, where he has practiced for a number of years.

**Cincinnati**—Of a class of 44 students of the Ohio-Medical College who received their degrees, June 12, Clifford J. Straehley, son of Dr. Erwin O. Straehley, a member of the board of trustees of the University of Cincinnati, held the highest rank, having maintained an average of 94.25 per cent. in all his studies throughout his course. Erwin M. Straehley, another son, was fifth with a percentage of 90.53.

**Fremont**—Dr. William H. Booth miraculously escaped with minor injuries when the sedan which he was driving was struck and demolished by a passenger train, May 14.

**Canton**—Dr. A. J. Hill, for many years a practitioner of this city, has located in Riverside, California. His local offices have been taken over by Dr. C. J. Schirack of St. Henry.

**Youngstown**—Dr. N. Portoghese was relieved of a diamond pin, valued at \$1,500, by three Italians who entered his office in the guise of patients, May 22.

**Cincinnati**—Commencement exercises for 32 graduates of Eclectic Medical College were held, May 13. Dr. Raymond Mollyneaux Hughes, president of Miami University, addressed the class.

**Canton**—Mrs. Katherine R. Fraunfelter, wife of Dr. James Fraunfelter and mother of Dr. Clare E. Fraunfelter, died at her home here, recently.

**Cleveland**—The seventy-sixth session of the American Institute of Homeopathy was held here June 20-25. Dr. L. E. Siemon was chairman of the arrangements committee for the meeting.

A SCIENTIFIC staff, composed of physicians and physiological, biological, pharmaceutical and analytical chemists, has been created by these laboratories. Each man is a specialist in his own particular field and many of them are scientists of distinction. We believe that the personnel of this staff is unexcelled by that of any manufacturing pharmaceutical house.

We offer the professional services of these gentlemen to medical men. Any questions along the lines of their endeavor will be gladly answered. In addition to the research work, which is being carried on in various branches of science, our staff is abundantly able to give physicians practical suggestions in all that relates to lues and its treatment.

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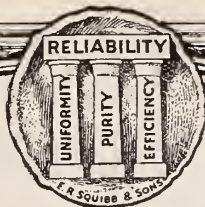
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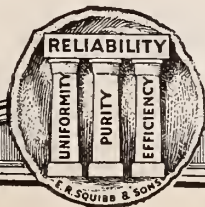
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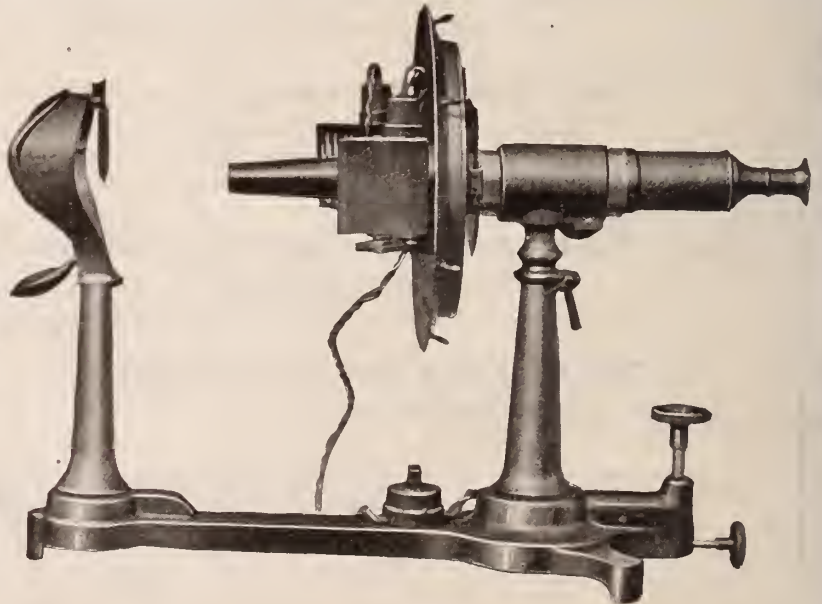
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This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.

Issued under the direction of the Publication Committee.

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## EDITORIAL COMMENT

by D. K. M.

### Primary Policies

Even physicians engrossed as they are in their everyday affairs of alleviating human suffering and in scientific progress cannot avoid being impressed as will other citizens of Ohio, by the great issues and the strong personalities prominent at this time in political affairs in Ohio.

Ohio physicians together with all other citizens of this commonwealth are proud that both presidential nominees are native sons of the same state. Each of these conspicuous figures in the Nation's affairs, have ardent admirers and close personal friends among members of the profession.

There are certain functions of government with which the medical profession is closely concerned and in which it is very much interested, just as there are certain principles involved concerning which the medical profession is in a better position than any other class of citizenship, to judge.

Even more directly than in national affairs is the medical profession interested in issues of state government. Not only are those to be elected in November to execute the laws, but those who are to make the laws or un-make them, are likewise to be chosen this year.

At the political primaries on August 10 the electors will choose the standard bearers for their respective party tickets. Successful partisans thus chosen, subject to the favor of the voters in their respective districts at the November election will constitute the eighty-fourth general assembly of Ohio, which will convene next January.

Never before has the medical profession been so vitally interested in important issues as some of those which will be developed in the coming session. The next assembly will record the absence of a number of those most prominent in the last session. The personnel of Ohio law makers for the next two years will be greatly changed from that of the past.

Perhaps never in the history of this country have the forces of disorganization been so active as they are at the present moment. Never before have so many of the otherwise calm thinking citizens been led astray by false doctrines and personal prejudice. The public, however, should at least be fully aroused by this time on questions of public health, and if it is so aroused it must recognize the fundamental importance of the medical profession. It must realize the value of scientific research and do nothing to hamper the progress of medical science. It must refrain from destroying individual initiative and that incentive necessary to long years of study

and difficult years of devotion to the public welfare.

Unfortunately many of the saner and more farsighted members of the past legislature are either not seeking renomination and re-election, or they are being opposed at the primaries. There is indeed grave danger that the personnel of the next general assembly will tend toward radicalism. There are those aspiring to office who either oppose safe principles of progress or advocate those of retrogression and experimentation. The medical profession in each county is vitally interested and should scrutinize the candidates very carefully.

Among other clearly defined issues which undoubtedly will be developed at the next legislative session are: compulsory state health insurance; abolishment of the state medical board; repeal of the Talley law; and inauguration of cult licensing boards, to all of which the medical profession is properly opposed, not as a measure of selfish preservation, but as a far-sighted precaution in public safety and public welfare.

The readers of this Journal who have not yet studied the report of the Committee on Public Policy of Legislation, published on page 438 of *The Journal*, June issue, might well do so.

As previously stated a number of former legislators, proponents of high standards, friendly to the medical profession and right in their general attitude, are not candidates for re-election. In many counties the so-called anti-medical groups and cults are quietly and unitedly promoting candidacies of their particular brand of radicalism.

Strange and startling as it is, the chief chiropractic lobbyist of last session, concerning whom the legislative investigating committee mildly declared "was not wholly without blame" announced himself as a candidate for the legislature. Just prior to the expiration of the period in which candidacies might be withdrawn, he requested that his name be withheld from the primary ballots. Whether or not he was fearful of "pitiless publicity" he and his associates alone can answer. The fact remains, however, that numerous others equally undesirable as public officials or as framers of laws, are seeking the favor of election at the hands of their constituents.

For the good of all it is hoped that the medical profession will be alert, that public opinion will be enlightened and that the legislators when elected, will be intelligently guided.

---

#### The Bad Old Days

Fifty years ago the graduation exercises of the Cincinnati College of Medicine and Surgery were held in the Christian Church, on Sixth street. And the newspaper report states that: "Rhine wine gave zest to the enjoyment of the assemblage."—Luke McLuke.

#### In Re Shortage of Physicians

It is generally conceded that Ohio as well as the nation will be facing a shortage of physicians within the next few years unless something is done to increase the percentage of graduates from medical schools. Dr. A. W. Freeman, state health commissioner, is credited with the statement that:

"Not nearly so many physicians are being turned out now as several years ago. Prospects for the future are alarming. There is no doubt but what the stiffer requirements have made possible better educated physicians, but it has tended greatly to decrease them in number, which makes their work far more burdensome than was that of the doctor some years back, when the country was flooded with them. Our great trouble today is not the lack of physicians, but improper distribution of them."

There is said to be one physician in Ohio for every 600 persons. The great majority of these live in the towns or cities, leaving the rural districts sparsely populated with medical supervisors. Towns of from 1600 to 1800 often have from nine to 10 doctors.

Emphasis is placed on economic conditions as a deterrent to the gradual increase of physicians the needs for which have been estimated at 3500 new licensees annually, whereas last year there were but 2656 admitted to practice in the entire country.

In addition to the length of courses of study combined with the increased cost of schooling and living expenses during these protracted terms, the trying and impecunious conditions for several years after starting practice are, of course, contributing causes. One of the most vital causes, however, and one infrequently mentioned is that of the uncertainty of medicine in as far as state and federal laws and regulations are concerned. With the narrow minded and nearsighted policy of some legislators and office holders, unqualified cultists are steadily gaining greater recognition. Combined with the trend toward greater state control of professional practice, incentive to long years of study and to careful scientific research is being largely destroyed.

The public, and particularly the public's representatives in elective office must begin to appreciate the fundamental importance of scientific medicine, to encourage its progress, and to refrain from enacting legislation which in the end cannot do otherwise than be detrimental to public welfare and public health.

Neither the medical profession nor the public desires developments which will make it necessary for communities to assess themselves for special funds in order to induce medical men to practice in their midst. The conditions have become so discouraging in some states of the Union that such a system of necessity has been resorted to. It is devoutly hoped that Ohio will be spared such a shame and disgrace.



### Prohibition Situation Clears

Fortunately for the physician harrassed and delayed by red tape and formal regulations, the rules governing the securing, prescribing, compounding and administering of intoxicants are at last becoming clarified. The erroneous impression that physicians would be required to give bond in such cases has also been abolished.

The federal government after several months' dealing with physicians during the period in which the federal prohibition law has been in effect, has come to realize that physicians in the course of their legitimate practice must not be harrassed, hampered or delayed. The government has further come to realize that the physician is in the best possible position to judge of the needs in regard to intoxicants or narcotics. A summary of the latest regulations on the subject are reproduced on page 599 of this issue.

The Department of Internal Revenue points out that a number of Ohio physicians are delinquent in registering or paying the narcotic tax which was due on or before July 31. The law provides that a penalty of 25 per cent. may be attached in case of delinquency.

As a resume it may be well to set forth the following classes as defined by the federal law on which special taxation are imposed:

Classes Nos. 1 and 2 are not required to file an inventory annually since they are now required to submit monthly returns showing the quantity of narcotic drugs on hand at the close of each month.

Classes Nos. 3 and 4 are not required to file an inventory when registering and paying the annual tax, but same must be filed on any date between December 31 and time of applying for such registry.

In other words, these classes just named will render their next inventory between January 1, 1921 and July 31, 1921. Form 713, *Inventory*, will be mailed *only upon application* and not with Form 678 as formerly.

Persons registered in Class 5 are not required to file an inventory of preparations and remedies exempt under Section 6 of the narcotic law.

Copies of Regulations 35 Revised have recently been mailed to the narcotic taxpayers.

Section 6 of the Harrison Narcotic Law, as amended by the Revenue Act of 1912, provides that every manufacturer, producer, compounder, or vender of preparations and remedies exempt under this section "shall register, as required in Section 1 of this Act, and if he is not paying a tax under this Act he shall pay a special tax of \$1 for each year or fractional part thereof \*\*\*." In this connection all those persons who are not now registered in Class 5, in addition to their registration in other classes, may obtain the proper forms upon application. In cases where persons are so registered the proper forms are herewith supplied but, as stated above, if you

are paying tax in another class do not include a remittance covering this Class 5 registration.

In case of delay in communication with either of these federal departments or other federal or state agencies, the office of the Ohio State Medical Association is at your service in checking up misunderstanding or following up requests or communications.

### "A Constructive Policy"

Under the above heading the bulletin to be published monthly henceforth by the Academy of Medicine of Cleveland, presents itself to the profession of that city in an editorial in Number One, Volume One.

This *Journal* on page 181 of the March issue, outlined in detail the plans and purposes of the Cleveland Academy under a substantial re-organization with a full time executive secretary, one of the avowed purposes being to emphasize the fallacy of compulsory state health insurance, and to prevent if possible such an enactment in Ohio. Under the caption, "Don't Tread on Me," another strong and convincing article is found in the Cleveland Bulletin, and which is reproduced on page 612 of this issue.

The introductory announcement of the first bulletin issued following the re-organization is so interesting and forceful that it is herewith reproduced in full:

It was Clemenceau who said: "We must have a constructive program. A policy of expediency is doomed to failure from the start."

The medical profession in dealing with the problem of Compulsory State Health Insurance must adopt an aggressive, constructive policy. To sit by and give free rein to the un-American Socialists, the anti-Labor Bolshevik and the impractical Social Uplifters (who have taken their thirty pieces of silver from the industrial interests of Germany and Great Britain), until they have fastened this Bismarkian scheme on Ohio, and then try to lock the door after the horse has been stolen will be as useless as it will be ludicrous.

The medical profession is opposed to Compulsory State Health Insurance because:

1. It will reduce the medical profession to an overworked and underpaid class of government employes like the public school teachers and the post office employes (as it has done in Germany and Great Britain).

2. It will reward and encourage the shyster and the quack practitioner who can bleed the public funds by taking on a huge list of public patients to whom he cannot pretend to give adequate medical service (as has been done in Germany and Great Britain.)

3. It will penalize and discourage, in short starve, the conscientious physician who wants to give to each patient the attention the case re-

quires. (Many such have left the profession in Great Britain and Germany.)

4. The profession will become so unattractive (like school teaching) that the right kind of young men cannot be induced to enter medical school. (As is the case now in England and Germany.)

5. In short, in one generation, medicine will cease to exist as an independent and self-respecting profession, and will become a parasite on the public and a sycophant at the feet of political power. (As in Germany and England.)

Now, while all these things are true, it will do no good for the medical profession to go to the people and say that Compulsory State Health Insurance should not be passed because it is a bad thing for the doctors, unless the public can be brought to see that anything that is bad for the doctors is bad for the public.

Compulsory State Health Insurance is bad for the public because:

1. The workman pays good money for bad medical service. (In England when a wise workman wants real medical service he hires a doctor privately at private rates, at the same time that he is compelled to pay premiums and taxes for the state health service.)

2. The medical profession, already much too small to meet the demands made upon it, will be further depleted, discouraged and demoralized (as in England and Germany).

3. The proposed scheme applies only to industrial workers. It does not touch any rural population, nor the very poor in cities who need charity most. Yet it is paid for by the whole community either through direct taxation or increased cost of manufactured commodities.

4. The increased cost of manufactured products, due to passing on the increased wages and other costs by which employer and employe must pay their health premiums, will increase the cost of living and make it harder for American goods to compete in foreign markets. (For twenty years German money has backed Compulsory State Health Insurance in the United States in order to hang this millstone around the neck of American foreign commerce. In 1912 the Germans succeeded in hanging the millstone on England.)

5. It rewards sickness and idleness and puts a penalty on industry and clean living. In short, Compulsory State Health Insurance, as it has worked out in Germany and England, and as it is proposed by the Socialists for adoption in this country, is—"An immense and costly bureaucratic organization for taking care of the trivial and imaginary ailments of the lazy and unprincipled workman at the expense of the conscientious workman, the taxpayer and the ultimate consumer of products. It does not touch at the real problems of public health and preventive medicine."

6. Results promised for the scheme are trivial

compared with the enormous cost. The cost in Ohio alone is conservatively estimated at \$80,000,000 a year. The same amount of money spent on a public health campaign among ALL the people against preventable diseases would eradicate every common contagious disease and would go far toward making tuberculosis and venereal diseases (the two real problems) unknown.

Now, if Compulsory State Health Insurance is such an impossible thing, why is it such a menace; where does it derive its strength. Here are the answers:

1. The movement has unlimited funds from unknown sources. (Conservative labor leaders like Samuel Gompers and Warren S. Stone are bitterly opposed to it, so the funds do not come from union labor.)

2. Managers of the movement for years have taken advantage of lack of interest in the matter even among those most vitally concerned.

3. They have also taken advantage of serious flaws in the present public health administration, as, lack of interest in maternity as a public concern; high infant mortality; lack of interest in health of school children; lack of liability for occupational diseases, etc. Unless remedied soon the proponents of Compulsory State Health Insurance will ride their joker industrial scheme through on the strength of these really deplorable conditions. They have involved their legislation with a mass of unrelated issues, including old age pensions, for the purpose of clouding the real purpose of the movement which is entirely selfish.

What then should the program of the medical profession, conservative labor leaders, and other American interests adopt in dealing with this insidious fungus of German origin. The answer:

1. Separate it into its component units and deal with each according to well recognized American standards.

2. The Workmen's Compensation Law should be extended to include occupational diseases. The liability rests with the industry alone and the industry should assume it.

3. Every mother should be afforded the privilege of some sort of standard minimum maternity service. This is a matter of public concern and one in which the state can well afford to invest its funds.

4. No funds should be spared in an effort to reduce the present alarming rate of infant mortality. Present agencies could be enlarged to care for this.

5. Medical supervision of school children and all others from infancy to the age of majority. The work already started should be greatly enlarged.

6. All health and sanitary agencies throughout the state should be co-ordinated under a strong state board of health with an active and responsible executive head, for the purpose of



enforcing a strict health and sanitary code, waging a war of extermination upon all preventable diseases, and keeping a complete and accurate continuous audit of mortality and sickness conditions throughout the state, as the first requisite of any comprehensive public health campaign.

A broad public health policy like this strikes at the very roots and sources of disease and is planned to benefit the whole people. The method is the most economical and every victory is a permanent gain.

Compulsory State Health Insurance seeks only to afford an immediate and temporary relief to a portion of the population, at an immense cost.

The American policy is for the state to concern itself with those things that affect the entire public, leaving the various individuals and groups freedom to work out their own salvation in their own way.

The Socialistic plan is for all to contribute everything to the state and all to share alike from the state.

The Bolshevik scheme is to bleed all classes for the benefit of one class.

Compulsory State Health Insurance is a combination of the last two.

#### New Ohio Sanitary Code

The new Sanitary Code which became effective in Ohio recently, contains many important changes from the physician's standpoint, notably in the regulations governing the control of communicable diseases, venereal diseases and maternity hospitals. The revised code is an added link in Ohio's progressive public health administration system and should receive the unstinted support of every physician in the state. The provisions for the control of communicable diseases, which are of especial interest to physicians, are published in full elsewhere in this issue.

#### Health Insurance Sidelights

A number of the county medical societies in the state have expressed their formal approval and commendation of the action taken at the recent annual meeting of the Ohio State Medical Association in opposing the scheme for compulsory state health insurance. Elsewhere in this issue is an interesting article on the subject by Dr. Otto P. Geier, of Cincinnati, who makes an interesting suggestion to the effect that the eight million dollars a year wasted by Ohio people in the purchase of patent medicine would be sufficient for a thorough trial in state-wide disease prevention, and which he believes, is fundamentally more sound and practical than the imposition of an expenditure of from fifty million to eighty million dollars on a scheme of sickness (or health) compensation.

Proper and timely interest by the medical profession in health conservation is emphasized by Dr. Geier who points out that education of the

public to seek early and regular medical attention would avoid many protracted cases of illness and loss of employment. He further points out that the proponents of state health insurance have failed to prove that their scheme would not make any more difficult the timely administration of public health affairs.

As a side light on recent developments on state medicine in Germany, a prominent writer recently discussed the storm of protest by German physicians against an extension by the government of the compulsory feature of the public health insurance laws to include all non-professional workers whose incomes are less than twenty thousand marks per annum.

The German medical men contend that raising the compulsory insurance limit from 5000 to 20,000 marks will practically reduce the physicians to poverty by taking away most of their private patients, but defenders of the government's action insist that such is not the case, as most of the persons covered by the new ordinance are already voluntary members of the public health insurance societies.

Addressing a meeting of the Berlin physicians Dr. Gustav Ritter, president of the Central Association of the Health Office Physicians of Greater Berlin, asserted that the new law would bring about nine-tenths of the population under the public health insurance, and that, as the fees paid to doctors for their services to members of the health societies were so small as to make it practically impossible for a physician to give the proper time to each patient, both the doctors and the public's health would suffer. Dr. Ritter said that if nearly everybody was to be covered by the public health insurance it would be better to make all the doctors employees of the state and be done with it.

#### Interesting Revelation

Never before were the pernicious effects of the so-called "patent medicines" so apparent as they have been since national prohibition became effective, judging from the annual report of the superintendent of police for Washington, D. C., which shows that drunkenness and serious crimes have increased in the Nation's capital during the past fiscal year, in spite of a decided decrease in the number of arrests and minor crimes.

Judging by this report and other apparently authentic information, many firms and individuals are manufacturing beverage concoctions under the guise of "medicine," for the sole purpose of avoiding the federal laws.

These police statistics not only indicate that drunkenness has increased during the fiscal year but that the majority of these cases were the result of the sale of patent medicines containing alcohol. A recommendation restricting the sale of such articles probably will be included in the superintendent's formal report, so he states.

# The Therapeutic Possibilities of Blood Transfusion --- Methods, Indications and Results\*

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**Editor's Note.**—Hard and fast rules cannot be drawn about blood transfusion. Dr. Arn maintains that the physician and surgeon must be guided by the single purpose of doing the most good with the minimum risk. He hardly thinks that any great number of unnecessary transfusions are carried out, but is convinced that many cases are lost either by not transfusing at all or by doing it too late. Also there are many patients whose illness could be materially shortened by the transfusion of blood, whose operations could be made less hazardous and whose recovery could be hastened and made less burdensome. Where bleeding has been abrupt and excessive a transfusion of blood is indicated because it has been conclusively shown that blood alone can raise a pressure and sustain it. It is a good working rule to transfuse if the blood pressure falls as low as 70 mm. of mercury, since life is hardly possible with a pressure below that limit. In haemorrhage of the new-born transfusion is a specific. In pernicious anaemia it yields results superior to any other mode of therapy and frequently acts as a life-saving measure by initiating the onset of a remission. Transfusion of blood opens up a new field of therapy in the treatment of chronic infections. Most of the dangers of transfusions can be prevented by avoiding the use of incompatible blood, excessively large injections and emboli of air or blood clot.

## HISTORICAL CONSIDERATION

**T**HE operation of blood transfusion is an ancient one. Mention of it may be found in early medical writings. In early times it was attempted by using blood of lower animals. It was not until after the discovery of the circulation by Harvey, in 1628, that it was taken up with added interest, as well as along scientific and rational lines. Dr. J. B. Dennis, professor of physiology at the University of Paris, successfully performed the first transfusion of human blood to a patient in 1667. This was done by means of a bone canula.<sup>1</sup>

The Germans used defibrinated blood quite extensively in the early part of the nineteenth century. But because of the dangers of intravascular clotting, it was given up, and use of saline solution substituted.

The modern practice of blood transfusion may be said to have had its origin in 1897, when Murphy reported his method of blood vessel suture in transfusion. In 1906, George W. Crile,<sup>2</sup> reported his special canula for transfusion. It was a marked advance in this work.

The difficulties and objections to all of these methods were the, (a) wound on the donor; (b) obliteration of important blood vessels; (c) and difficulties encountered in technique.

Further investigation developed the syringe method, Lindeman,<sup>3</sup> the paraffined tubes of Kimpton and Brown<sup>4</sup>; the syringe method of Unger,<sup>5</sup> and finally the anticoagulants of Lewishon.<sup>6</sup> The simplest as well as the most practicable of all of these is the anti-coagulant or Citrate method, and is the method of choice in the majority of clinics today.

## TECHNIQUE OF CITRATE METHOD

The citrate method is the method in general use today. The apparatus necessary consists of the following:

- 1 tourniquet
- 4 Intravenous needles (Kaliski type)
- 4 pieces of rubber tubing 12-inches long
- 18 grains of Sodium Citrate
- 1 30cc. graduate
- 1 500cc. graduate
- 1 glass stirring rod
- 1 glass cylinder with 3-feet of rubber tubing
- 2 or more cambric needles

The citrate solution is prepared by boiling the citrate in two ounces or 60 cc. of sterile distilled water for two minutes, and 30 cc. or one ounce is placed in the sterile 500 cc. graduate containing the sterile glass stirring rod. The intravenous needle is introduced into the vein of the donor, after transfixing same with a cambric needle, and blood is allowed to flow into the 500 cc. graduate. When nearing the 250 cc. mark, the other 30 cc. or one ounce of citrate solution is added, and blood is permitted to flow until there are 500 cc. of mixture. If more blood is desired, a sufficient amount of citrate solution is added to maintain the ratio of 0.24 per cent, or 30 cc. of 2 per cent citrate solution for each 250 cc. of blood.

Should clotting occur in the needle of the donor, it should be immediately withdrawn and another inserted.

The citrated blood is then transferred to a suitable flask, and permitted to flow into the vein of the recipient, very slowly at first, especially for the first 60 cc. of citrated blood; marked slowing of pulse, attacks of syncope, precordial distress, dyspnoea, and severe pains in lumbar region are danger signals, and transfusion should be stopped and another donor secured. Except in acute haemorrhage, where the bulk is most important, 500 cc. of mixture is usually all that is required to stimulate the blood forming organs in chronic conditions.

## INDICATIONS OF TRANSFUSIONS

*Hard and fast rules cannot be drawn. One must be guided by the single purpose of doing the most good with the minimum risk. I hardly think that*

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.



any great number of unnecessary transfusions are carried out, but I am convinced that many cases are lost either by not transfusing at all, or by doing it too late. And not only this, there are many, many cases whose illness could be materially shortened by introduction of blood, whose operation could be made less hazardous, and whose whole aftercourse could be made less burdensome. The following is a list of probable indications:

1. Transfusions for actual haemorrhage:
  - (a) Traumatic.
  - (b) Gastric and duodenal ulcer
  - (c) Post-partum.
  - (d) Ruptured ectopic pregnancy.
  - (e) Typhoid haemorrhage.
2. Transfusions in connection with the surgical operations.
  - (a) Preliminary to, during and after operation.
  - (b) For post-operative haemorrhage.
  - (c) For post-operative shock.
  - (d) For post-operative anaemia and prostration.
3. Transfusions for the relief of haemorrhagic conditions.
  - (a) Purpura haemorrhagica.
  - (b) Haemophilia.
  - (c) Haemorrhage secondary to (1) blood diseases, (2) severe infections, (3) jaundice, (4) idiopathic uterine.
4. Transfusions for blood disease:
  - (a) Pernicious anaemia.
  - (c) Leukaemia.
5. Transfusions for infections:
  - (a) Infections with pyogenic organisms.
  - (b) Subacute streptococcus endocarditis.
  - (c) Subacute infection of any nature other than septicaemia.
6. Transfusions for intoxication and poisonings:
  - (a) Toxaemia of pregnancy.
  - (b) Eclampsia.
  - (c) Uraemia.
  - (d) Benzol poisoning.
  - (e) Illuminating gas poisoning.
7. Transfusions for debilitated conditions:
  - (a) Cancer.
  - (b) Malnutrition.
  - (c) Simple anaemia from any cause.

#### TRANSFUSION IN RELATION TO HAEMORRHAGE AND OPERATION

In discussing class one and two, we may briefly discuss other means of controlling haemorrhage. Until the advent of blood transfusion in a practical form, there was no dependable reserve remedy in the physician's armamentarium, so far as great blood losses were concerned, chief among these is the futility of drugs, and next in order is abuse of salt solution. One has only to consult the hospital records to discover how profoundly drugged were most patients who had the misfortune to bleed, and a little closer study of some records will show how thoroughly waterlogged by salt solution they were in addition.

It should be generally understood that if the bleeding has not been too great, a few hundred cc. of salt solution are all that is needed to tide a patient over a dangerous period. In cases of very severe haemorrhage, the amount may be in-

creased a bit, but if 1000 to 1500 cc. of solution do not steady a falling blood pressure, or cause a slight rise, its introduction had better be discontinued. Even where there has been a rise, the greatest caution must be exercised, for be it remembered that in these desperate conditions, salt solution will frequently cause a rise in blood pressure, but will not sustain it.

Where the bleeding has been excessive, a transfusion of blood is indicated because it has been conclusively shown that blood alone can raise a pressure and sustain it. Salt solution has no sustaining power, *per se*, and when the fall comes after a rise from this means, it usually portends the end, for added salt solution is useless. It never raises a pressure twice.

As the result, then of blood transfusion, we have been able to really study the phenomenon of haemorrhage for the first time, and we have learned the value of doing as little as possible in the condition. Rest, quiet, attempts to check the bleeding by mechanical means, an ice bag over or near the site of bleeding as possible, a bit of morphine for the restlessness occasioned by the condition, and salt solution, and we have the entire armamentarium for treating bleeding. For we have learned that the body itself does more towards checking haemorrhage than can be done by outside means, by automatically lowering its own blood pressure, and thereby causing a slowing of the circulation and renewed opportunity for coagulation of the blood at the site of leakage. But the more I see of haemorrhage and anaemia in general, the more I am convinced of the utter futility of having a specific rule by which to be rigidly governed. Each case is a study unto itself; each individual represents an entity which must be judged from all angles, and experience in handling the condition must have a great deal of weight in the ultimate decision as to the course to pursue. It is advisable though to have some tentative plan of procedure in case of haemorrhage, and since there are certain fundamental features common, in a degree, to all cases, it is possible to formulate a working rule. For instance, a sudden loss of blood is a much more serious matter than a gradual depletion, and a rapidly falling blood pressure is always a warning of value, though it must be remembered that nausea of the slightest degree will effect this phase of the situation. But these two features really are dependable guides in the majority of instances, and experience has demonstrated that a good working rule is *to transfuse if the blood pressure falls as low as seventy mm. of mercury, since life is hardly possible with a pressure below that limit*. In some instances, if the physician or surgeon in charge of the case has not taken the steps usual in emergency cases, it may be wise to delay until these can be instituted, preparation for transfusion being made in the interval. If the actual bleeding has been checked, if the patient is quiet, if salt solution has been given

in the proper manner, and the blood pressure still remains around seventy, with a tendency to flutter a little below this point, it may be assumed that the case is utterly hopeless, unless new blood is introduced, and procrastination at this stage of the game is a fearfully dangerous plan.

Quoting the late Lindeman,<sup>8</sup> "*in cases of haemorrhage, blood transfusion is specific, no matter how extreme the haemorrhage, provided some life is still present. There is no condition so grave from haemorrhage alone, that a patient cannot be revived by blood transfusion.*"

Case Number —. Mrs. H. Diagnosis, Ectopic Pregnancy. Was admitted to hospital for operation. While being prepared, was seized with sharp pain in left side in region of tube, followed rapidly by fainting and collapse. Pulse imperceptible at wrist. Respiration rapid, air-hunger marked. Patient semi-conscious. Operation was rapidly performed under local anaesthesia, bleeding vessel secured, left tube removed. Transfusion was started. Patient became conscious after receiving 300cc. of blood, pulse perceptible. Was given all told 1,000cc. of blood from Group II donor, patient being in Group II. Pulse 120 on leaving table, and made good recovery.

#### TRANSFUSION FOR HAEMORRHAGIC CONDITION

Transfusions for haemorrhagic conditions comprise a group of unknown etiology, and whose treatment in the past have run the entire gamut of therapeutics. In Purpura Haemorrhagica, the results of transfusions are only fairly good. Repeated small transfusions are often necessary to control bleeding.

Haemophilia is not cured by transfusion; but for the bleeding of haemophilia it is practically a specific. It will succeed when all other methods fail. Valuable time should not be lost in attempts to control bleeding by other methods, since we have at our command a specific that will not only control bleeding, but replace the blood lost.<sup>9</sup>

*In bleeding of the new-born, transfusion is a specific. An almost exsanguinated infant, too weak to cry and in a dying state, is transformed immediately into an apparently healthy, rosy and crying baby.* As in haemophilia, it will save the lives of those who are not helped by subcutaneous injections of serum or blood. Temporizing by using less effective measures, may cost the baby's life. This is especially true in cases of melena neonatorum, which are the most serious, because we do not know just when the haemorrhage began, or how much internal haemorrhage is taking place. Just as soon as the diagnosis of bleeding from the stomach or the bowel of the new-born is made, transfusion should be performed.

In jaundice, where the coagulation time is delay, a transfusion will lessen the danger of bleeding. In cases of obstruction of the common duct, even of long standing with marked jaundice, operation may be successfully performed without haemorrhage or oozing, if a prophylactic transfusion has been made.

Case No. —. Mr. H., age 60. Jaundice of eight weeks' standing. History of repeated at-

tacks of gall-stone colic. Jaundice followed last attack of colic. Was given a prophylactic transfusion of 350 cc. of blood, and operated at end of 24 hours. Several stones were found in the common duct, as well as in gall-bladder. No more than ordinary bleeding during operation; no oozing following. Coagulation time before transfusion 15 minutes. Patient in Group II, and donor in Group IV.

#### TRANSFUSION FOR BLOOD DISEASES

Transfusion for blood diseases of this class, viz., pernicious anaemia and leukaemia, may be a life saving measure in prolongation of the life of the individual. *In pernicious anaemia, transfusion yields results superior to any other mode of therapy. Frequently it acts as a life-saving measure by initiating the onset of a remission.* There is no evidence that the disease may be cured by this method. Repeated transfusions may be necessary, but the lives of many of these individuals can be made useful for years. They should all be grouped, and have at their command suitable donors. Small doses of blood seem to bring about a remission as quickly as large doses. Some donors seem to accentuate a remission sooner than others. In these cases the same donor should be used for subsequent transfusions, as the dose of blood need not be large.

*A small percentage of cases of pernicious anaemia do not respond to transfusions, they being of the so-called acute variety.*

Case illustrating the so-called chronic variety is as follows:

Case No. —. Mr. W., aged 52. Diagnosis, Pernicious Anaemia. Hemoglobin 28 per cent., Sahli. Group II. 1, 950,000 R. B. C. Many normoblasts marked poikilocytosis, dyspnoea and palpitation on least exertion. Began to feel weak 18 months ago, and had to quit his occupation one year ago. Had been in bed most of the time for past two months. Was given 300 cc. of blood at intervals of one week Group IV donor, for three doses. Marked improvement after first transfusion as evidence by Hb. 40 per cent Sahli., increasing appetite, dyspnoea and palpitation less marked. Hb. 55 per cent after second transfusion, and was able to walk three squares to barber shop. Returned to his home in northern part of state after third transfusion.

In acute lymphatic leukaemia, only a temporarily favorable effect can be secured by transfusion, even though we withdraw a large amount of blood by phlebotomy and make use of a massive transfusion obtained from two donors, or employ repeated transfusions, or carry out transfusions very early in the disease.

#### TRANSFUSION IN INFECTIONS

Our greatest possibilities for research lie in Class V, or the sub-acute and chronic infections. It has been fully demonstrated by clinical evidence that transfusions in localized pyogenic infections will increase the patient's vitality and aid in overcoming the infections.

In bacteraemia, when the source of the organisms can be found and eliminated, the results are excellent, as in cases of sinus thrombosis follow-



ing mastoiditis, in which the jugular has been ligated.

Many of our long, drawn out cases of appendiceal abscess and empyemia would be materially shortened by small therapeutic doses of new blood. Examples of this class are the following:

Case No. —. Mr. D. Diagnosis, Secondary Anaemia; Hb. 35 percent., R. B. C. 2,500,000. Operated three months previous, at which time a left nephrectomy was done for pyonephrosis, secondary to renal calculus. Patient has made a very slow and discouraging recovery. Has been unable to work, and was confined to his home. Was given 350 cc. of blood, and ten days later 300 cc. more. After second transfusion, patient was able to be up and care for himself. Returned to his home feeling stronger, and with a Hb. index of 65 per cent.

Case No. —. Miss A. Diagnosis, Chronic Empyemia. Cavity of eighteen months duration, holding about 400 cc. Operated second time; Modified Shede operation, patient weak, pulse 116 to 120, and wound discharging large amounts of pus. Was given a therapeutic dose of 300 cc. of blood. After two days, patient said she felt much stronger, wound began to show healthy granulation, discharge became less in amount, and pulse rate fell to 88.

Other examples abound, but these are sufficient to indicate the necessity of an awakening on the part of surgeons to certain definite deficiencies in their handling of anaemic, debilitated states secondary to chronic infections. If a person suffers a sudden loss of a great volume of blood, we make up the deficiency by adding fresh blood. Why, then, do we not likewise in the many secondary anaemias, that also suffer blood losses, but in smaller amounts and over longer periods? I have transfused a few of these chronics, and the new blood has done more to restore hope and sleep and appetite than weeks of rest and barrels of iron and arsenic. I do not decry these necessary adjuncts in the least; on the contrary, I advise their constant use, and have seen splendid results obtained. I merely deprecate and condemn their promiscuous employment in conditions beyond their therapeutic reach. They can do a certain amount of good, but in many cases they are absolutely worthless, and in many of these, one or more blood transfusions will almost produce a miracle, after which the drug and rest-therapy may be judiciously resumed. This has been proved, but has not been recognized.

#### TRANSFUSION FOR POISONING

Transfusions in this class are still in the experimental and research stage, except for poisoning from illuminating gas.

This was one of the early fields for blood transfusions, and consists of blood letting and blood giving. These cases are usually bled 700 to 1000 cc. and then transfused a similar amount.<sup>10</sup>

Cases in Class VII, are really a repetition of conditions described earlier in this paper. Kerley,<sup>12</sup> in a recent article has advised small transfusions in certain non-specific types of Marasmus.

He usually gives several doses of not over 30 to 50 cc. at intervals of five to seven days.

#### DANGERS OF BLOOD TRANSFUSION

The dangers from blood transfusions can be easily avoided, and the operation made perfectly safe by avoiding the following:

- (a) Use of incompatible blood.
- (b) Excessively large transfusions.
- (c) Emboli of air or blood clot.

*Incompatibility of Donor's Blood:* Moss<sup>11</sup> has shown the presence in human blood of iso-agglutins and iso-hemolysins. These substances will cause agglutination and hemolysis of the red cells when incompatible bloods are mixed. Moss found that agglutination frequently occurs without hemolysis, but that hemolysis is always associated with agglutination. Human beings can be divided into four groups, depending upon agglutins present in serum, and the capacity of cells to agglutinate. If a transfusion is to be safe, both the donor and the recipient should belong to the same group, or cells of the donor should not be agglutinated by serum of the recipient.

These groups are permanent in their characteristics, and depend upon the Mendelian laws of inheritance.

The following are the four groups with the percentage of individuals in each group:

Group I, 10 per cent of all individuals contain no agglutins.

Group II, 43 per cent of all individuals contain agglutinin A.

Group III, 7 per cent of all individuals contain agglutinin B.

Group IV, 40 per cent of all individuals contain agglutinin A. and B.

#### RELATIONS OF THE FOUR BLOOD GROUPS

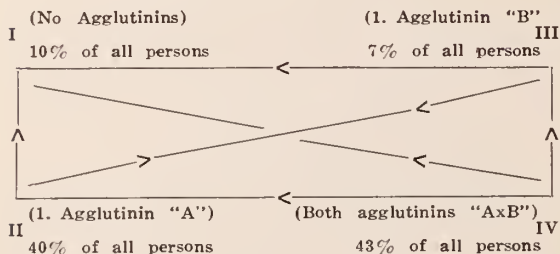
Group:	Serum				
	I.	II.	III.	IV.	
I.	o	x	x	x	I.
II.	o	o	x	x	II.
III.	o	x	o	x	III.
IV.	o	o	o	o	IV.
	I.	II.	III.	IV.	

It may be seen that no serum agglutinates the red cells belonging to its own group, but will agglutinate and may hemolyse corpuscles of other groups, except Group IV. By having on hand serum of Group II and III, the agglutinating and classifying tests are easily made, not requiring over fifteen minutes.

We have made it a practice of having at our command suitable professional donors, properly classified through physical examinations, and with negative Wassermanns. They can all be reached by telephone, and are paid a fee for their blood.

By having this group of professional donors, the time of making the tests is greatly lessened,

and only need of classifying recipient or patient. In emergency, a Group IV donor can be used to transfuse any other class.



#### MOSS AGGLUTINATION GROUPS

Essential for safety; serum of recipient should not agglutinate corpuscles of donor.

If you do not have professional donors suitably classified, it is always best to use the nearest blood relative.

The second danger lies in transfusing an excessive amount of blood. This may lead to embarrassment of circulation, dilatation of the heart and pulmonary oedema. The question of dosage is an important one, and depends upon several factors; age of individual, condition for which transfusion is indicated, and conditions of the circulatory apparatus, especially the myocardium. *In any form of myocardial derangement, if transfusion is indicated, small amounts should be given, and repeated at definite intervals, to avoid myocardial embarrassment.*

Generally speaking, 500 to 1000 cc. is the usual amount transfused, except in the blood diseases, in which 250 to 350 cc. seems to suffice to stimulate the blood-forming organs.

Infants under six months of age receive 60 to 90 cc., given into the longitudinal sinus or jugular vein.

Danger from emboli can be avoided by proper technique. In using citrate blood, we pass the blood through several layers of gauze.

#### REACTIONS

The Mayo clinic reports 20 per cent of transfused patients to have some degree of reaction. The Crile clinic does not report any reactions, believing them to be due to improper grouping. Our reactions have only been two in our series, and both were due to faulty grouping.

*The ease and simplicity of the citrate method of transfusion will suggest an increasing number of indications for its use. Who knows, but what some of the acute infections may be treated by transfusions of small therapeutic doses of blood from donors immunized by the disease, or by vaccination?*

The future alone will solve these questions. As stated by one of the investigators; the subject of blood transfusion has thrilled the imagination of man, ever since the discovery of the circulation of the blood. In the last quarter of a century some of these dreams have been realized. The difficulties of technique of the old methods;

the uncertainty of success; the pain, infection and life-long scars to patient and donors; the impericisms of its therapeutics relegated its use to the court of last resort.

The newer method of blood transfusion makes possible new applications. They open up a new field of therapeutics, a field that will possibly solve some of the present insoluble enigmas in the treatment of diseases, and in the conservation of human life.

These matters are not capable of animal experimentation, and I cannot do more than suggest these possibilities to the medical men to develop them. The time has arrived when we should seriously begin to study blood dosage and therapy.

#### CONCLUSION

1. Salt solution will never raise a blood pressure the second time. Transfusion of blood alone will save the patient.

2. The Citrate Method is the method of choice, because of the ease of application and preservation of important blood vessels for future transfusions, or other intravenous therapy, should occasion require.

3. Transfusion is a specific for haemorrhage of the new-born. In haemorrhagic diseases it will replace blood loss, stop the haemorrhage, but not cure the condition.

4. Transfusion saves delay and decreases mortality in cases with secondary anaemia requiring operation, as fibroid tumors and jaundice.

5. Transfusion of blood opens a new field of therapy in the treatment of chronic infections.

6. Most reactions can be averted by making correct group tests, and transfusing from the same group, except in extreme emergencies, when Group IV may be used without grouping. In a series of one hundred cases, our reactions have been 6 per cent, and 4 per cent due to mistakes in grouping.

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#### DISCUSSION

DR. LUTHER P. HOWELL, Columbus: I wish to mention the facility with which transfusion can be done in infants before closure of the anterior fontanelle. As you recall the superior longitudinal sinus anteriorly is located directly in the median line although at the posterior fontanelle it lies to the right. If the needle be introduced just anterior to the posterior angle of the anterior fontanelle and directed backward at an angle of 45 degrees with the interparietal suture to a depth of about one-sixteenth of an inch, the point of the needle will not impinge upon or injure the walls of the sinus as it lies near the center of the lumen. The precaution must be made to keep the hand supporting the needle tightly steadied against the head and to inject the blood relatively slowly. Furthermore in haemorrhagic disease of the new-born it is necessary to type the blood, if that of the father be given and the use of only a small amount is necessary.



## Medical Aspects of Blood Transfusion\*

Louis A. Levison, M. D., Toledo

**Editor's Note.**—The conditions in which aid of a lasting nature may be reasonably expected from blood transfusion, according to Dr. Levison, are disappointingly small. In fact it may be said that blood transfusion does not cure any disease. The only exception to this would probably be certain haemorrhagic states in early infancy. However, blood transfusion is life-saving in many conditions in which haemorrhage is present as a symptom. While one may become contemptuous of its dangers, occasional deaths ensue even after all the requirements of grouping have been met. Only the most extreme emergency warrants a blood transfusion without determining the compatibility of the donor and recipient. In view of the reactions of successive transfusions, involving the same participants, a separate determination of type should be done prior to each injection. The benefit derived is probably due to the rise in haemoglobin percentage and not to the mass bulk of the blood itself. Sooner or later blood transfusions cease to bring about remissions in anaemias, but before this time there are usually pronounced cord signs to indicate the hopeless nature of the disease. A field yet to be explored is the use of transfusion employing immunized blood in serious, chronic infections such as endocarditis.

**S**INCE the introduction of anti-coagulants in the practice of blood transfusion, there has sprung up a most extended and constantly increasing literature. *Primarily*, this is so because this method has permitted transfusion to be done by great numbers of physicians and surgeons, whereas the former methods required such a degree of skill, refinement of technique, and team work that the occasions on which it was employed were necessarily limited. No procedure which is limited in its employment to certain individuals or clinics permits the greatest possibility for good. *Secondarily*, the popularization of blood transfusion is due to the general knowledge of its wider indications in disease, but this factor is relatively unimportant in comparison with the simplification of method.

### LIMITED VALUE OF BLOOD TRANSFUSION

Coincidental with the extension of popularity of blood transfusion as a therapeutic measure has come the realization of the limitation of its possibilities. Since the attempt to save the life of Pope Innocent VIII, in 1492, by blood transfusion, it has been used in many instances in which success could not reasonably have been anticipated. There is something almost alluring in the very name blood transfusion and to the public it always means a life saving measure whatever the disease condition present. *The conditions in which aid of a lasting nature may be reasonably expected are disappointingly small. In fact it may be said that blood transfusion does not cure any disease. The only exception to this would probably be certain haemorrhagic states in early infancy. However, blood transfusion is life-saving in many conditions in which haemorrhage is present as a symptom.*

The number of conditions in which blood transfusion has been attempted is very large. The mere enumeration of such a list is long and can not be attempted here. There is no question that there will be a recession of the present tide of

popularity of blood transfusion as regards its use in all sorts of conditions until the pendulum comes to rest at a point at which the indications for this procedure are clear-cut and proven. *Despite its popularity and the comparative ease of the present day technique, it should not be forgotten that there is an element of danger in blood transfusion. One may become contemptuous of its dangers, but the fact stands out that occasional deaths ensue even after all the requirements of grouping have been met. Most of these deaths are probably not reported. Many of these deaths are probably unexplainable within the limitations of our present knowledge of the subject.* Occasionally, one is tempted to do a blood transfusion to hasten convalescence and where there is no question of any danger to life. It is in this class of patient that a certain degree of conservatism may be pardoned. In a patient seen several weeks ago whose haemoglobin had been reduced to 50 per cent by a profuse uterine haemorrhage from fibroid changes in the uterus, blood transfusion was considered, but rejected because the haemorrhages did not recur to any considerable degree after X-ray treatment and the haemoglobin index rose to full 85 per cent within two or three weeks from attention to feeding and rest in bed. In this sort of patient, a blood transfusion would probably have been justifiable, but the good results which could be produced by ordinary methods of treatment and which could also in a sense be predicted in advance did not in my opinion balance the possible, even if remote risk to be run.

### COMPATIBILITY OF PATIENT AND DONOR

The preliminary grouping or typing of the patient and donor is now coming to occupy its proper place in the scheme of blood transfusions. This procedure was formerly too often done hurriedly and carelessly. While the element of haste may be desirable in certain instances, the typing should be done accurately, if at all. *Only the most extreme emergency warrants a transfusion without the determination of compatibility. Unfortunately there is no standard tech-*

\*Read before the Medical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

nique for this procedure and the multiplicity of methods sometimes hampers unbiased judgment in a given case.

Grouping of blood may be dispensed with in the case of infants as the division into groups does not take place until after a year or two of life. In certain instances this phenomenon is delayed further and instances have been reported where the group was not established until the age of 10 or 11 years. It is at once evident that the phenomena involved in group determinations are not simple, as occasional clinical incompatibilities ensue where all the laboratory requirements have been met. Blood transfusion may be done without the slightest hesitation when the laboratory matching has been effected but the occasional instances of haemolysis or agglutination *in vivo* after all the tests *in vitro* have been satisfactorily done is an indication of the complexity of this biologic phenomenon.

*It is not probable that an individual changes his group as a result of repeated transfusions, but this is a possibility. There is an impression, however, in some quarters that blood transfusions, when repeated several times from the same donor, are more apt to produce reactions or to increase them when previously present. The difficulty of drawing fair conclusions in this respect is hampered by the fact that repeated transfusions can not be done from the same donor within short periods of time. In longer periods the conditions surrounding the donor and recipient have probably changed in many respects, so that it is not justifiable to infer that any increase in reaction has been due to the previous injections. It has been the experience of the writer to have seen much more serious reactions after the second or third transfusion from the same donor, but on the contrary instances have been noted where similar results has followed the first injection and the remaining ones have been followed by no untoward result. In view of our present lack of knowledge concerning many of the complex factors involved, it is not possible to explain all the sequellae of each transfusion. However, it is not too much to ask, in view of the variable behavior of successive transfusions involving the same participants, that a separate determination of type be done prior to each injection. This is not usually done, but the slightly added amount of work seems justifiable.*

#### REACTION

The subject of reactions following blood transfusions is probably more interesting to the clinician than any other phase pertaining to this field of therapeutics. More accurate methods of blood grouping have served to decrease reactions in large degree, especially when they were due to improperly matched donors. However, the presence or absence of reactions is not solely a question of matching donor and recipient. As is well known, reactions may occur when donor and

recipient are in the same group and when every laboratory requirement has been met. The controversy between the adherents of transfusion with whole blood and by the citrate method has no place in this communication. It is generally admitted that reactions are more frequent with citrated blood. It is not necessary that all transfusions be done with one method, as all the virtues of this method of therapeutics can not be confined within such limitations. It is true, unfortunately, that a certain part of this controversy has been due to the fact that certain practitioners of the art have been desirous of popularizing their particular technique, because they alone were more competent to practice it. The virtue of the citrate method is in its ease of performance without regard to comparative merits. A transfusion actually done, even though there are some objections to the method, is preferable to an ideal one never performed. The citrate method has transferred a considerable part of this work from surgical to medical hands, where it largely belongs, as the greater part of the indications for its use are in the domain of internal medicine rather than in surgery. Mention may be made of the exception that in war time blood transfusion was employed in haemorrhage more often by the surgeon, but in the main in civil life, the indications for its use are more often medical. A reaction of some degree may be anticipated in two out of three patients transfused by the citrate method. However, a reaction may be so only nominally and discovered only after particular search or investigation. Many patients are not conscious or hardly so of the fact that they have passed through a reaction. There is a certain mental exhilaration or excitation following blood transfusion that sometimes masks a mild reaction. This psychic effect immediately following a transfusion is not usually considered, but its existence can not be denied. The mystical association by the patient of healthy blood with vigor and renewed health is shared in large degree by the laity, which impression is accentuated by the prominence given this procedure in the daily press.

The reactions vary from the slightest rise in temperature to the severer types which sometimes have fatal endings. The chill which is usually present may be trivial or severe, and occurs within one or two hours after the injection. Sweating following the chill is very unusual. There may be in addition such symptoms as pains in the head, back or over the praecordium, dyspnoea, coughing, sometimes convulsions, shock, unconsciousness and later haemoglobinuria. I have seen urticaria several times after transfusions.

The mechanism of the reaction is not entirely clear. A considerable amount of work has been done recently on this subject and some light has been thrown on it. The citrate itself, which early came under suspicion, has been in large part, ab-



solved from blame. The amount of citrate necessary for an ordinary transfusion is not sufficient in amount to produce much in the way of a toxic reaction and it has been shown further that it is not essential to have a chemically pure product. The conclusions of Drinker and Brittingham sum up in large degree our present knowledge of the nature of reactions. They state that there are three factors which are concerned in this process. These are: (1) very rare gross incompatibilities which escape detection *in vitro*; (2) changes in the plates that occur as a part of the process of coagulation, and (3) direct action of the sodium citrate on the red cells promoting haemolysis.

#### RESULTS

*Following a blood transfusion there is an immediate increase in the number of red cells, but this is not permanent and the drop may be very rapid. On the other hand, the haemoglobin percentage maintains its rise for a longer period than in the case of the red cells. The white cells are increased but not for a long period. The polymorphonuclears preponderate in the differential count. There is no characteristic morphologic change which can be noted in the stained specimens.*

#### SCOPE AND UTILITY

The conditions in which blood transfusion has been done are numerous and need not be enumerated here. The experience of the writer has been for the most part with pernicious anaemia, and to a lesser degree in leukaemias, haemorrhagic states and secondary anaemias. *The results in pernicious anaemia have often been disappointing, but the induction of remissions in many instances is so prompt and gratifying that it seems indicated in every instance where there is no specific contraindication.* Remissions may be more confidently anticipated when the course of the disease has not been too prolonged. The duration of the remission itself is so variable that its length can in no way be predicted. It has been stated that the remissions which have been produced in pernicious anaemia by blood transfusion last longer than those which are spontaneous. Certainly this is open to question as every clinician can doubtless recall spontaneous remissions lasting many months or years. Blood transfusion is followed by a remission in from 40 to 50 per cent of the cases. This applies to the first transfusions, as later in the course of the disease, it may be more difficult or even impossible to bring the remission about.

There are a number of observations which are of interest in regard to the initiation of remissions after blood transfusion. Contrary to the statements of certain observers, it is not always necessary that the amount of blood transfused be excessive. The writer has seen remissions and marked improvement from the transfusion of

amounts of blood as small as 100 cc. In one instance, in which technical difficulties prevented the completion of the transfusion, only about 100 cc. of blood was transfused, and the haemoglobin index arose from 45 to 75 per cent at which point it remained for a period six months with corresponding clinical improvement. *It is the stimulation of the haematopoietic system which brings about the improvement and not the mass bulk of the blood itself.* This statement is made with due regard for the fact that the red cells are capable of functioning for periods of several weeks following their transfer.

The fact that a remission does not follow a certain transfusion is not final proof that it is impossible to produce one. There are undoubted differences in the blood of different individuals in their stimulating action on the haematopoietic system, but it is not possible to determine this in advance. It is better to use the same donor twice if possible when it is known that the previous result has been good. In the same way, if a remission has not followed, another donor should be employed. The higher percentage of remissions which occurs in early cases may be due to the higher haemoglobin content at this period of the disease. *Sooner or later, blood transfusions cease to bring about remissions, but before this time there are usually pronounced cord signs to indicate the hopeless nature of the disease.*

#### VALUE OF BLOOD TRANSFUSION IN HAEMORRHAGIC STATE

Even more gratifying than its use in pernicious anemia, is the value of blood transfusion in the treatment of certain haemorrhagic states. It is an almost ideal procedure for loss of blood. The more acute the condition, the more satisfactory the results. In the haemorrhages of early infancy, transfusion usually acts as a specific. In haemophilia, the bleeding can usually be arrested, but the probability of later attacks is not lessened. In purpura haemorrhagica, the bleeding can usually be arrested after one or more transfusions. The earlier observation that the use of citrated blood appreciably increases the possibility of haemolysis and delays the coagulation and for that reason is not applicable for haemorrhagic states has not been confirmed by later experience. This is an instance in which clinical results do not follow theoretic anticipations.

#### CONCLUSIONS

The limitations for the use of blood transfusions have not yet been reached. *A field yet to be explored is the use of transfusion employing immunized blood in serious, chronic infections, such as malignant endocarditis.* There have been a number of case reports in which this procedure has been employed with good results, but final conclusion can not be drawn. A healthy individual of the same blood group as the patient is

immunized with the bacterial organism isolated from the blood or tissues of the latter. Transfusion is then done in the effort to transfer the bactericidal properties of this immune blood to the patient. The transfusion of healthy blood in streptococcus infections, endocarditis, post-puerperal and the like has not been attended with success, because healthy blood does not contain a considerable amount of bactericidal substances.

It may be urged in conclusion that every physician render himself conversant with the indications for and the contraindications against blood transfusion. The simplicity of some of the more

recent methods such as the citrate technique permit its use in the home or anywhere even with limited facilities. The method employed is not the important debatable point on an occasion such as this. Different methods yield similar final results in different hands. The really important thing is to make the practice of blood transfusion a commonplace procedure instead of the unusual one demanding newspaper publicity each time that it is done, in order that the undoubted benefits resulting from it will not be denied any patient in need.

421 MICHIGAN ST.

## Cranio-Cerebral Injuries\*

Theron S. Jackson, M. D., Cleveland

Editor's Note.—Dr. Jackson emphasizes the fact that cranial injuries are almost always emergencies, and that those who handle them must be ready to make a rapid, systematic examination, accurate enough to enable them to use the correct treatment for the individual case. Cushing's classification of cranio-cerebral injuries is as applicable to civil practice as to the surgery of war. One of the chief difficulties encountered is in evaluating cases of concussion. Skull fractures and cerebral haemorrhage are so frequently masked by concussion that they must always be suspected. In the differential diagnosis, Dr. Jackson, has learned to rely on a rising pulse pressure and a falling pulse rate as a definite indication for operation. Delay until symptoms of medullary compression arise, spells disaster. Valuable diagnostic information may also be obtained from the incidence of papilloedema, and the results of lumbar puncture, reflex reactions and stereoscopic radiographs.

THE subject of injuries affecting the skull and its contents has been discussed at length from every possible angle. Extensive reports have been published of the findings in many series of cases, both large and small, and it would seem that there would be agreement in every detail of symptom and sign. However, such is not the case. Instead of the findings from varied observers being similar, they are frequently opposed, not in the finer detail of symptomatology, but in cardinal diagnostic points.

Judging from my own experience, and the expressions of other men, the thing that is needed is a simple code of observation, diagnosis and treatment. There must be a clearer interpretation of observations.

*Cranial injuries are always emergencies, and we must, at all times, be in readiness to make a rapid, systematic examination, which is accurate, and prescribe treatment which is correct. There is no time to look up the literature and read up on the case.*

### A CASE REPORT

The recent war has materially increased our information about a number of cranial cases. The subject of gunshot wounds of the head has been gone into in great detail, and I believe that all of us who were devoting most of our time to

that type of work were pretty well agreed as to the best methods of treatment. It would certainly be a waste of time for me to report my series of cases after the number which have already appeared in literature. My operative procedures were the same as those described, and there was not much difference between my soldier patient with a piece of shrapnel in his brain and the soldier patient who landed in some other hospital.

I do wish, at this time, however, to report just one case, as I have not seen a similar one reported.

### CASE

Pvt. F. H., wounded August 18, 1918. A large fragment of shell case entered the right occipital lobe carrying with it a portion of cap, hair and bone fragments. The patient was received twelve hours after injury in a semi-conscious condition. I excised the wound and removed all damaged skull, but could not follow out the *en bloc* method, as the hole was too large and stellate lines of fracture radiated from the wound. The damaged brain, indriven bone fragments and F. B. were removed, the tentorium being exposed in the process.

Convalescence was slow, and I was ordered from No. 9 General to Mobile Hospital No. 5, before the patient was on the high road to recovery. However, a few months ago he came to see me, and about the only real signs of his wound are

\*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.



the deep occipital depression, and an almost complete hemianopsia.

#### CUSHING'S CLASSIFICATION OF CRANIO-CEREBRAL INJURIES

In order to properly describe and correlate our cases, it is necessary that some standard order should be adopted. Cushing has worked out a classification which is ideal, not alone from the standpoint of military surgery, but for civil practice as well. There is practically no difference between the man who is injured by a fragment of shell and the victim of a boiler explosion. Cushing's classification is on the anatomical basis.

*First*, those wounds involving only the scalp.

*Second*, simple fractures without dural injury.

*Third*, depressed fractures of various kinds which involve the dura.

*Fourth*, fractures with bone fragments driven into the brain.

*Fifth*, penetrating wounds with bone fragments as well as foreign body within the brain.

*Sixth*, penetrating wounds involving the ventricles.

*Seventh*, cranio-cerebro facial injuries.

*Eighth*, traversing wounds.

*Ninth*, bursting fractures.

If, to the above classification, we add the group of concussions, and make note of the anatomical location of any given injury, it seems to me that we have a simple and easily handled method for grouping any series of cases.

The first four groups of this classification are those with which, in civil life, we are mainly concerned. Simple concussions, scalp lacerations, with and without fracture of the skull and concomitant intra-cranial trauma, certainly make up the vast majority of injuries. The last five groups will rarely be met with, and in case they are, no difficulty would be encountered in arriving at a correct diagnosis, and instituting proper treatment as is described in all of the war surgery literature.

#### THE DIFFICULTY OF EVALUATING CONCUSSION CASES

Every injury involving the cranium, however trivial it may seem, is worthy of the most careful study. Nearly every medical man has seen individuals recover completely who have suffered severe cranial injury; who have been rendered unconscious with rapid weak pulse, shallow respirations, relaxed sphincters and in fact have presented a picture of severe concussion. On the other hand, we also see those who have suffered an apparently light injury, with no easily recognized signs or symptoms of severe intracranial damage, presenting in a few months distressing symptoms of cerebral irritation arising from an overlooked fracture.

The *symptoms of concussion* are apparently fairly well agreed upon by all authors. Uncon-

sciousness may be complete, or in slight cases only a momentary giddiness. The skin is pale and clammy. Respiration is ordinarily slow and shallow. The pulse is rapid and irregular. The muscles are relaxed and flaccid. The pupils are equal but of variable size. The reflexes are variable, though usually present, except in very severe cases.

#### POST MORTEM FINDINGS OF CONCUSSION

The above condition most certainly occurs without gross injury to the cranium or its contents. Considerable work has been done in attempting to explain just what happens but so far the results are rather unsatisfactory, and the explanations in themselves need explaining.

The most satisfactory evidence presented comes from postmortem findings. The brain is oedematous, with frequent findings of exceedingly small haemorrhages scattered throughout the cortex, the injury having expended itself on the brain as a whole and having so damaged the intercellular tissues as to allow an escape of cerebrospinal fluid; the resultant pressure of which interferes with the working of the cellular elements.

When the patient is seen presenting the above outlined symptoms, we are justified in a diagnosis of concussion, but we are not justified in calling our work done and contenting ourselves with instituting treatment.

#### FRACTURE AND INTRA-CRANIAL HAEMORRHAGE

A large proportion of fractures present only the symptoms of concussion in their early stages, and it is only by continued observation that we see the stage of concussion pass over into that of cortical irritation and compression.

As intracranial haemorrhage takes place and compression symptoms become apparent the respiration changes from the slow shallow type of concussion, and becomes even slower but deep and labored. This change is fairly constant. If the pressure is not relieved, Cheyne-Stokes breathing supervenes and medullary collapse becomes imminent. I have seen two cases wherein the period of apnoea lasted 50 seconds. Needless to say both resulted fatally.

The condition of the pulse is probably the most constant diagnostic factor, we have. It is one thing that all authorities seem to agree upon.

The rapid, fluttering pulse of concussion gradually drops to normal, then in the event of haemorrhage with cerebral compression it falls lower, the change being gradual and slow. Without doubt, if it becomes full and strong, this type of pulse has often deluded the anxious watchers and cheered them up considerably. Inasmuch as the normal pulse rate varies greatly in different people we must ascertain if possible what their pulse rate is ordinarily and make our judgment accordingly. However, the pulse is not infallible and frequently examples are reported, and our

hospitals have records showing a normal or increased pulse, while other conditions pointed to cerebral compression, which diagnosis was confirmed at operation.

#### INCREASED SYSTOLIC BLOOD PRESSURE AND PULSE PRESSURE AS A DIAGNOSTIC SYMPTOM

There is much dissension in the ranks of authority regarding the value of increased systolic pressure as an indication for decompression. Some observers urge that with intracranial haemorrhage and cerebral compression the systolic blood pressure ascends: the greater the compression, the higher the blood pressure. Such conditions may have been obtained in the cases of certain individual observers. However, others are just as positive that the systolic pressure does not go up in any great or startling manner. From careful perusal of a considerable amount of literature and those hospital records which were available, I believe that in general we may look for a systolic rise corresponding somewhat with the lowered pulse rate.

*The chief blood pressure factor is generally overlooked: it is the pulse pressure. This, as pointed out, particularly by Armitage and Wilensky, rises as the pulse rate falls. We may have abnormal or only slight increase in systolic pressure with a correspondingly low diastolic pressure, the difference of which will give us a pulse pressure much greater than the rate. The pulse pressure is the true guide to a recognition of the amount of work the heart is doing in its attempt to force blood to the vital centers. In my opinion the patient with a systolic pressure of 200 and a diastolic of 160 is in much better condition than one with a systolic of 160 and a diastolic of 60.*

#### INCIDENCE PAPILOEDEMA

The presence or absence of papilloedema is given great weight by some authorities but here again we have vast differences of opinion. From one clinic we have reports of papilloedema being present in only twenty per cent of their cases. From another clinic choke disc was reported in nearly one hundred per cent of their fractured skulls. What are we to believe when such differences are reported by men whose truthfulness and ability is unquestioned? It seems to me that the discrepancy lies with the observers: certainly two series of cases might vary a great deal, but not 80 per cent. Undoubtedly one observer called any haziness of the disc a papilloedema and the other only considered the marked case as positive.

No one questions that it is present with severe compression, but whether it appears early enough to be a safe guide is open to question. It is one of those symptoms whose presence is positive evidence, but whose absence is not negative.

#### LUMBAR PUNCTURE AS A DIAGNOSTIC GUIDE

Lumbar puncture in my estimation has con-

siderable value and I believe that it is good practice to use it routinely in all cases where there is doubt as to the diagnosis. The presence of blood stained fluid is certainly positive evidence of subdural bleeding, but on the other hand the absence of blood does not prove that there is no haemorrhage. Frequently clear cerebrospinal fluid has been obtained and later craniotomy has revealed large subdural haemorrhage.

#### VALUE REFLEX SIGNS AND STEREOSCOPIC RADIOGRAPHS

Valuable information may be obtained from examination of the reflexes; presence of paralysis and types of convulsions. These abnormalities would only in rare instances have weight with regard to the advisability of operation.

It is almost superfluous to mention that stereoscopic radiographs should be obtained whenever possible.

#### CASE REPORTS OF APPARENTLY MILD CASES

So far I have only spoken of injuries of such severity as to present symptoms of cerebral compression. Possibly the patient who is rendered unconscious is, to a certain degree, fortunate, inasmuch as such a patient is bound to excite a certain amount of interest. Let me illustrate by two examples, types of apparently simple wounds which were disastrous in their results.

**CASE 2.** A boy, five years of age, was hit upon the head with a piece of brick, which inflicted a slight scalp wound. He was not rendered unconscious or otherwise incapacitated. The mother bound up the wound, and in the course of a few days consulted a physician in regard to the infection which had developed. However, the wound was doing well enough and quite naturally was not probed or otherwise tampered with.

Eight months later the boy developed a strabismus and an oculist was consulted. Glasses were fitted; after three weeks the child was brought back to the oculist for observation, and he noted that the left leg was dragging slightly and that the left arm was slightly spastic, which condition had not been noted at the first examination. Subsequently the child was referred to me.

**Examination.** A well developed, well nourished boy of five years. Mentally good, but a slight slurring of the speech which the mother stated had come on recently.

Over the right parietal region was a small cicatrix about  $\frac{3}{4}$  inch long, and a slight dent in the skull could be palpated under the scalp. Internal strabismus of the right eye. The tongue protruded to the left. The left arm and leg were somewhat spastic, slightly smaller than the right, and the reflexes were exaggerated.

Stereoscopic radiographs showed convolutions of the brain indenting the skull only about the point of injury.

Unfortunately I was not permitted to further investigate this case, inasmuch as I advised fur-



ther examination, serological tests and probable operation. Some one was discovered who gave reasonable assurance to the parents that medicine would cure whatever was causing the trouble, and I have not seen the patient since.

It is my opinion that the original injury caused a subdural haemorrhage, resulting in a haemorrhagic cyst, which is gradually increasing in size and just beginning to produce symptoms.

The preceding case is of the type wherein the medical man has all the odds against him, since at the time of injury there was not a single sign denoting trouble, except the slight scalp laceration. It illustrates with what care every cranial injury must be judged.

CASE 3. The other case is that of a British soldier who was hit over the right frontal region with the butt of a rifle. A ragged contused scalp wound was the only evidence of trauma. He was not rendered unconscious and came down the line as a sitting case. Beyond the presence of the wound his only complaint was of headache. Upon exploration of the wound, the intention being to excise the contused edges, and do a primary suture, a jagged, depressed fracture  $1\frac{1}{2}$  inches long and  $\frac{1}{2}$  inch wide was discovered. There was stellate splintering of the inner table. The dura was uninjured but was tense and non-pulsatile: upon incision several drams of blood clot were evacuated.

These cases represent to me types: one of slight, and the other of severe injury wherein classical symptoms of intracranial trauma were absent. Whether such cases do well or badly rests entirely upon the accuracy of the medical attendant's perception and judgment.

#### VALUE OF OPERATIVE TREATMENT

The treatment of cranial injuries has long been palliative and expectant. The darkened room, the ice bags, the morphia and such attention to diet and bowels as is necessary is familiar to everyone. Such methods will undoubtedly be effective in simple concussion, and fractures that are slight and produce no intracranial disturbance other than the associated concussion, but it is unfortunate that this antiquated method still persists to so great an extent in private and hospital practice. The patient is put to bed, and if in the course of a few hours he "comes to", the pulse reacts, and he is apparently holding his own, the tendency is to let him alone. On the other hand if he grows rapidly worse the frequent conclusion is that it is useless to do anything anyway.

*The reason for our reluctance to perform craniotomy seems to me to hark back to the old idea of the great danger involved in opening the skull. If operation is undertaken under reasonable conditions of surgical cleanliness, and by an operator who knows the anatomy of the skull, together with the correct methods for opening and then observing intracranial conditions, there*

*should be no more operative danger than from celiotomy. Who hesitates to open the abdomen in case of suspected haemorrhage?*

According to the best available statistics, the end results following operation, whenever there has been a reasonable suspicion of intracranial injury, have been much better than those following palliative treatment.

*Craniotomy must be performed at the earliest moment that a diagnosis of cortical irritation or compression is justified. If it is put off from hour to hour in the hope that the patient will improve we are too often confronted with the symptoms of medullary compression, and then it is too late.*

In conclusion I urge that attention be paid to every detail of the patient's condition, particularly to the relation between the systolic and diastolic pressure; and the relation of pulse pressure to the pulse rate. *With a rising pulse pressure and a falling pulse rate operate.*

#### NEW AND NON-OFFICIAL REMEDIES

During June the following articles were accepted by the Council of Pharmacy and Chemistry for inclusion in New and Non-Official Remedies:

Abbott Laboratories—Benzyl Benzoate, Elixir Benzyl Benzoate, Tablets Benzyl Benzoate.

Arlington Chemical Company—Pollen Extracts—Arlco: Aster, birch, cherry, clover, corn, dahlia, daisy, dandelion, dock, elm, goldenglow, goldenrod, hickory, June grass, locust, maple, narcissus, oak, orchard grass, poplar, poppy, red top, rose, rye, sunflower, timothy, walnut, willow, ragweed (ambrosia trifida), ragweed (ambrosia artemisiaefolia.)

Fritzsche Brothers, Inc.—Benzyl Benzoate.

Gilliand Laboratories—Pertussis Bacillus Vaccine, Diphtheria Toxin—Antitoxin Mixture.

Heyden Chemical Works—Ichthynat.

Hynson, Westcott & Dunning—Whole Ovary—H. W. D., Whole Ovary Tablets—H. W. D. five grains.

Lederle Antitoxin Laboratories—Anitpneumococcus Serum (Polyvalent), Gonococcus Glycerol Vaccine, Pollen, Antigen-Lederle (Fall Type).

Hollister-Wilson Laboratories—Capsules Corpora Lutea Desiccated, Hollister-Wilson; Tablets Corpus Luteum Desiccated, Hollister-Wilson; Pituitol Obstetrical; Pituitol Surgical.

Lederle Antitoxin Laboratories—Pollen Antigen-Lederle (Spring Type.)

Announcement is made by Schering & Glatz, Inc., that the price of Atophan, direct to physicians, has been reduced to \$1.15 per box of twenty ( $7\frac{1}{2}$  gr.) tablets, and that of the powder to \$3.00 per ounce carton. This price includes postage and insurance but one cent must be added for each 25 cents, or part thereof, to cover war tax.

## The Problem of Forceps Prehension in Obstetrics\*

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**Editor's Note.**—Most writers on and teachers of obstetrics tacitly assume that the tyro can perform a forceps extraction properly with axis-traction instruments provided certain simple rules of procedure are followed. The truth, however, is that most writers have circulated gross misconception in the use of forceps in their text-books and many common errors about axis-traction have crept into the practice of the average obstetrician. A study of the mechanism of labor as well as the principles of axis-traction serve to enlighten all concerned regarding their relations to each other. The public joint may be burst asunder by the force of misguided axis-traction. While the posterior surface of the pubes furnishes the best guide as to the axis of the pelvis in applying the blades of the forceps there are special advantages in mastering their cephalic application as well. Such competence will enable the obstetrician to avoid cerebral lesions of the new-born due to misapplied pressure on the infant head. Besides emphasizing such broad and underlying principles of practice as make the use of axis-traction forceps safe, Dr. Gillespie, in detail, describes various newer methods which have given satisfaction in his hands.

ONE who supervises an obstetric service where the internes come from Class "A" Colleges all over the country, cannot fail to note the inadequacy of the teaching with regard to the application of the Obstetric Forceps. An examination of text-books fails to find one in which what could be termed a forceps technic is presented. The forceps must be properly applied and traction must be made in the axis of the parturient canal, yet no hint is given as to how the blades are to find their way into the axis of the pelvis and it seems not to be recognized that if the blades do not lie in the axis of the pelvis, traction in line with the blades will not be axis-traction.

### MISCONCEPTIONS IN THE USE OF FORCEPS

While all would not positively affirm, most teachers seem to tacitly assume, the truth of the following from Garrigues: "With the new forceps a mere tyro can perform a forceps extraction properly. He has only to follow the rule of keeping the traction-rods at the distance of one centimeter from the shanks of Tarnier's instrument, and hold them in contact with the shanks in using Simpson's axis-traction forceps. Nothing could be simpler. As long as the accoucheur follows the rules, he is sure to pull in the right direction." I fail to find any interne whose professor of obstetrics has combatted this mechanical absurdity, and I know of no text-books in which the author questions specifically such an assumption, while in many of them it is clear that no study of the subject has been made.

Those who support this contention are fond of referring to the paper of Milne Murray in which he laid down specific rules for the construction of an axis-traction forceps with separate traction-rods so that a mechanic could construct a forceps "de novo" which would give ideal axis-traction. Unfortunately none of them seem to have seen the paper by the same author and ap-

pearing in the same transactions in which, five years later, he abandoned this idea and showed plans for the construction of traction-rods, which enabled the operator to attach the traction handle so that he could pull in what he judged to be the axis.

### COMMON ERRORS

When most teachers assume, without question, the truth of assertions which an intelligent study would show to be absurdities, it is not surprising to find the forceps operation restricted within absurd limits and other methods of delivery resorted to, in many cases, where forceps delivery would be both easy and safe. Probably the most common error in applying forceps consists in applying the blades posterior to the axis of the pelvic cavity. If the head is already distending the pelvic floor and the occiput emerging under the pubes, the only evil arising from this is premature extension of the head, with unnecessary damage to the pelvic floor. If, however, the head is in the cavity of the pelvis, the occiput anterior and the chin in contact with the sternum what is the mechanical effect of traction by blades placed nearer the sacrum than the pubes? So long as the head is propelled onward by the natural forces of labor, flexion is maintained and the suboccipito-bregmatic circumference of the head encounters the resistance of the pelvic girdle. If we substitute traction force to the bi-tempered diameter of the head it is deflexed and broader diameters are brought to bear against the bony pelvis. In an easy case where one only attempts to supplement nature's efforts the pains may, acting through the spine, prevent deflexion and satisfactory progress result, but in a case of positive disproportion, where considerable traction is required, in cases where exhaustion has suspended the active efforts of nature, the stronger our efforts at traction the greater the deflexion of the head, the broader the cephalic diameters brought into the girdle of resistance of the pelvis, and the greater the trauma sustained by the foetal head and the soft

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.



parts of the mother. Many difficult forceps deliveries are only difficult because the blades are thus improperly applied, but how can the operator be blamed for a bungling application of forceps when teachers and authors, whose province it is to instruct, are silent as to the danger and the means of preventing it? But suppose that he has been deluded by the general acceptance of the dogma that "traction efforts with axis-traction forceps are always in the right direction," what are the possibilities in such a case?

The application of traction in line with the blades tends to pull the forehead downward, the rounded occiput, instead of pointing downward toward the pelvic canal, turns forward toward the anterior pelvic wall. Broader cephalic diameters are brought into the resisting pelvic diameters and the more force you apply the greater is the resistance produced. Here the increased effectiveness of our traction through retro-curved traction rods increases the force at the command of the operator and the greater the force perniciously applied, the greater the resultant pernicious pressure against the bony canal. Under these circumstances your traction effort is transmuted into a bursting force within the pelvis. *I have known of two instances where the pubic joint was burst asunder while attempts at delivery were being made with axis traction forceps.*

I have frequently succeeded in delivering with very little effort, where an operator had exerted his utmost strength without effecting progress, by simply separating the blades and by a leverage movement of the handles bringing the blades nearer the pubes. In neither case where the pubic ligaments were ruptured did the operator have any conception of the mechanism by which it was produced. It is, perhaps, never possible at the bedside to determine the exact axis of the given pelvis but, if one deviates not more than ten degrees from the axis, practically no force is lost and it is a comparatively simple matter to approximate the axis of the pelvis within ten degrees, by pulling parallel to the posterior surface of the pubes. *But the posterior surface of the pubes is not only a guide to our efforts at traction, it furnishes our best indicator as to the axis of the pelvis in applying the blades.* If the blades are brought forward parallel to the posterior surface of the pubes they will not deviate more than ten degrees from the public axis and if the center of your blades are a little more than two inches posterior to it, they will be in the center of the pelvis. If thus applied they will occupy a position in the pelvic axis and if traction is made in the axis of the blades, you have axis-traction, whether you apply your traction through separate movable traction rods, a fixed tractor posterior to the handles, a pistol grip forceps, handles turned back parallel to the blades, or by a compromise pull, with two hands, so applied that the resultant is in the

axis of the blades. In other words, if you have secured axis-prehension any device which enables your traction to be made in line with the blades results in axis traction, but if axis prehension is not effected, no device can possibly effect axis traction. The pelvis differs so much in different individuals as to steepness; because of slight, normal, or excess of the sacro-vertebral angle, that unless the operator keeps the matter in mind when attempting to apply forceps he will prove a bum workman, will grasp improperly a large percentage of heads and will fix a limit to the forceps operations founded solely upon his own inefficiency. If he has not studied with care the proper principles of forceps construction, he may equip himself with an instrument poorly adapted for the work, and then fix limits for forceps application based entirely upon the limitations of his instrument. Instances are numerous in the literature, where men of eminence have made statements totally incomprehensible to a close student of obstetric mechanics, until an examination is made of the type of instrument habitually used by the writer.

But correct forceps prehension does not necessarily consist in placing the pelvic curve of the blades in the curve of Carus.

#### ADVANTAGES OF CEPHALIC APPLICATION

While authors and teachers among the most eminent of the past, have taught the pelvic application of the blades, and insisted that they should be placed to the sides of the pelvis regardless of the grasp secured of the head, one who has thoroughly tested the cephalic application, and compared results, must conclude that the grasp secured of the head is, in many cases, as essential to success as is the correct direction of the subsequent traction.

In posterior positions of the occiput the head will descend with much less force if a cephalic application is secured, but, even though the blades are applied accurately to the sides of the head, they are apt to grasp only the occipital end of it unless a special effort is made to bring the blades to lie in the long diameter of the cranium. According to such writers as accept the Uvedale West theory that the difficult labor in posterior positions is due to lack of flexion, the blades should be applied to the occiput in order to promote flexion. The list of authors who have supported this theory contains the names of many of the most illustrious men who have wrought in the field of obstetrics, but they wrote in an age when craniotomy was more frequently resorted to than forceps, or when forceps delivery was so seldom practiced that real skill was rarely attained. The fact that the occiput rapidly narrows from the bi-mastoid diameter backward, and that most instruments have a little more space between the posterior edges of their blades than between the anterior, renders such a hold insecure, and, when making traction with instruments thus applied,

the operator finds that the blades slowly work backward until their posterior edges stand out from the head. If this shifting of their grasp is not observed, or if its signs are not properly interpreted, there comes that tragedy of the delivery room, the forceps come off with direful results to the maternal soft parts.

When the head occupies the right oblique diameter of the pelvis with the occiput behind, the safest and most efficient grasp is secured by bringing the tips of the blades far enough to the left to lie anterior to the ears of the child. While bringing the tips forward to secure this coveted position the shank must be pressed nearer the right side of the pelvis. In this way the widest transverse diameter of the head will lie within the fenestra, and the application is absolutely secure without the exercise of severe compression. With blades thus applied traction in the axis of the blades will not be in the axis of the pelvis but will be in the direction in which the head must advance if we are to secure progress with least exertion and trauma.

When the saggital suture lies transverse in the inferior strait, either as a result of a flattening of the pubes or because of the partial rotation of a posterior position of the vertex, if the blades are applied at the sides of the pelvis an improper grasp is secured. Experiments upon the dead child, which show that a greater compression can be produced in the long diameter than in the transverse without producing a gross damage to the brain, are not to be taken to indicate that such an application is safe. Forceps compression is seldom sufficient to produce a lesion independently of the cerebral circulation. *My attention was first called to the bad effect of having the occipital bone driven under the parietals from reading Marion Sims' observations on the relation of this accident to the cerebral lesions of the newborn and observation has fully justified his contention.* You may, by applying the blades in an oblique pelvic diameter, obtain a firm grasp of such a head, but to drag it through by such an application will force large diameters to pass the restricted pelvic outlet and is therefore poor mechanics. It is seldom difficult to apply the blades one in the hollow of the sacrum and the other under the pubes. The posterior blade will drop into position almost of its own weight; the anterior may be worked past the forehead and up in front until it lies directly behind the pubes. In a partially rotated occipito-posterior position, move the handles in the arc of a circle and bring the occiput forward, when the blades may be readjusted and the delivery completed.

#### TRANSVERSE AND OBLIQUE APPLICATIONS

If, however, the head is transverse because of a general flattening of the pelvis, rotation should not, at this time, be attempted and the problem of intelligent forceps prehension contains several important elements.

(a.) Unless care is exercised the pelvic curve of the blades will cause their tips to grasp only the occipital end of the head, and even that insecurely, so that upon attempting traction they may slip off inflicting damage to the vaginal wall. By carrying the handles well toward the occipital side of the pelvis the blades may be directed anterior to the ears of the child. This will bring the equatorial diameter of the head within the forceps grasp but there is another factor to be looked after before traction should be exerted.

(b.) In these cases you may have a marked Naegele's obliquity, or its opposite, so that it is imperative that the saggital suture is midway between the lower ends of your blades, or you may with one tip be above the base of the foetal skull, while the other inflicts damage upon the neck of the child. If the blade whose fenestrum is most accessible to the examining fingers is pushed further in, and the other is withdrawn until it can be made to lock with it, you have a secure hold and one which will enable you to effect delivery with the least fetal and maternal trauma.

Having secured such a grasp of the head traction should be made parallel with the posterior surface of the pubes, until the point is reached where rotation will bring the occiput beneath the pubes.

#### HIGH FORCEPS

We indorse the dictum of Robert Barnes: "*In proportion as the head is arrested high in the pelvis, in the brim, or above the brim, the necessity, the utility and the safety of the forceps become less frequent. As a corollary from the preceding proposition increasing caution in determining on the use of forceps, and greater skill in carrying out the operation, are called for.*" He did not, however, reject the use of forceps under these circumstances. To recognize difficulties and dangers, and to find means of over-coming the one, and lessening the other, are the tasks which the student and practitioner of obstetrics must ever keep in mind if he would advance the scientific frontier in his department. Believing that there is a field for forceps delivery with the head in the brim, or above the brim, and believing that the difficulties and dangers may be largely obviated by a careful study of the mechanics of the various problems involved, I present for your consideration several procedures which in my hands have largely robbed the high forceps operation of its terrors.

By far the most frequent reason for delay of the head above the brim is the flat or rachitic pelvis. Not only is this our most frequent cause of delay, but it offers our best opportunity for safe and skilful forceps manipulation, if one understands thoroughly the various mechanisms by which nature attempts to overcome her difficulties, and possesses the manipulative skill and



judgment necessary to artificially accomplish the mechanism.

Let it be understood in the beginning, that the frequently expressed opinion that the blades must of necessity be placed at the sides of the pelvis, to deliver a head retained at the brim, has no basis except the inexperience of the individual making the assertion. For more than twenty years, I have applied blades antero-posteriorly in and above the brim, and in not a single instance has it been impossible to so apply them. For good mechanical reasons it is easier to grasp the sides of the head than in many cases where deep engagement of the head has been effected. The limits of the paper compel me to assume that this group of experts is familiar with the various mechanisms by which nature attempts to circumvent the mechanical difficulty presented by a pelvis whose chief contraction is in the conjugate of the brim.

#### CANTING THE HEAD PAST THE PROMONTORY

Where the head presents transversely above the brim of a rachitic pelvis, Goodell recommends version, with the object of canting the head past the promontory in such a way that its incompressible base would pass the conjugate obliquely, and the elastic portion of the cranium, through severe but momentary compression, could be sprung past the obstruction. Any operator who has studied his writings on this subject, and has with intelligence followed his instructions, is prepared to accept, without question, his contention that this was a distinct and epoch-making advance in obstetric art; yet it has its drawbacks. In a multipara, the head, having passed the brim, could usually be extracted with sufficient promptness to insure the safety of the child, but, in a primipara, the unprepared parturient canal might delay extraction beyond the limits of safety.

To meet the needs of first labors, I devised the following forceps maneuver, which secures the same mechanical advantage in canting the head past the obstructing brim, yet obviates the necessity of immediate extraction, with its attendant dangers to unprepared maternal soft parts. In the first few cases in which I used it, more than twenty years ago, I waited until the sagittal suture had, following the mechanism described by him, approached the pubes. This insured that there was sufficient of the parietal bone below the promontory to utilize the space there, and permit the anterior edge of the incompressible base to clear the pubes, and yet have that portion of the head in contact with the promontory sufficiently elastic to yield to the pressure. Of recent years I have simply placed the head in the ideal position by manual manipulation, and thus saved hours of waiting. If the occiput is to the left, introduce the left blade, with its cephalic curve following the curve of the sacrum, and insinuate its tip between the posterior

lip of the cervix and the head. By depressing the handle the blade is made to follow the curve of the head, its convex edge hugging the left side of the promontory. The second blade is introduced on top of the first, its tip pointing toward the right of the sacro-iliac joint, when, with a spirit movement, it is brought to the right side of the pelvis. As the head always lies more toward the occipital side of the pelvis, there is ample space through which the anterior blade may pass upon the other side. Two fingers behind the blade assist in the movement forward of the anterior blade, while the hand grasping the handles execute a spiral movement bringing the blade past the side of the pelvis, the right ramus of the pubes and forward under the pubic arch. There is just one difficulty in the execution of this maneuver; as the blade sweeps between the head and the hand of the assistant by which it is fixed in the brim, he instinctively flinches, unless he has been warned to expect it. Let me say parenthetically that I am aware I am violating that time-honored rule not to apply forceps to a floating head, but I have *anchored* it. If the assistant will hold the anterior side of the head in the hollow of one hand, and press it firmly toward the operating table, it cannot float.

This anterior blade can be accurately felt through the uterine and abdominal walls. It must be pushed upward until its tip is beyond the incompressible cranial base, and held there while the posterior blade is brought into proper relation with it and locked. The operator must next note whether the pelvic curve of the blades has carried their tips too near the occiput. If so the handles are to be loosened, and, by carrying them toward the occipital side of the mother, the blades are shifted toward the median line. Grasping the handles firmly, you pull in the axis of the pelvic outlet, until the counterpressure of the pubes has fixed the posterior side of the head firmly against the promontory. Then, without relaxing your traction, throw the handles backward into or beyond the axis of the inlet. The promontory indents the posterior side of the head, the edges of the parietals pass each other, with a sudden narrowing of the lateral diameter, which enables it to pass the restricted conjugate. There is space below the jutting promontory for the parietal bone to drop far enough backward to permit the anterior edge of the incompressible base to enter the pelvis, so that the entire resistance is sustained by that portion of the head capable of compression. That the compression is violent no sane man will attempt to deny, but Goodell contended that even very violent but momentary pressure is less injurious than a small percentage of that pressure sustained for a considerable period and extensive experience with this procedure has amply demonstrated the soundness of his position. While executing this movement with the forceps the head enters the pelvis in a few seconds, by a movement of rotation,

round the promontory. It comes so quickly that the bystander almost invariably exclaims "they slipped." One minute the head is entirely above the brim, the next it is entirely within the pelvis. Cease traction the instant the head enters the pelvis, for the blades, which were perpendicular to the base and secure with the head deflexed, may over-ride the occiput and endanger the mother as soon as flexion occurs with the entrance of the head into the pelvis. In a primipara it may be well to remove the blades and leave the case to nature for a time; in a multipara a beginner should remove the blades and, after ascertaining the exact position of the head, re-apply and deliver. Personally, I have never found this necessary. Separating the handles the blades are brought nearer the center of the pelvis, by a leverage movement, when the head is rotated, by moving the handles in the arc of a circle, and then delivery is completed as in an ordinary intrapelvic application of forceps.

This maneuver was worked out in theory nearly twenty-five years ago after careful study of the writings of Sir James Y. Simpson and Goodell,<sup>2</sup> as well as the work of Duncan, conducted with a dead foetus and a deformed artificial pelvic brim, where the child was pulled through the brim head last by dead weight. I am not aware that anyone else has attempted to apply the same mechanical principles in head first deliveries, but, after an extensive consultation and hospital experience, I am ready to assert that I have never had any difficulty in carrying out this plan of using forceps. In a good many cases of induced labor for flat pelvis, I have been able to await much fuller development of the child than would otherwise have been safe, and, in consequence, my results have compared very favorably with those in uncomplicated cases.

In flat pelvis we sometimes have the bi-parietal diameter entering at one side of the promontory with exaggerated flexion. The projecting promontory keeps the sinus high, so that only one-half of the brim is occupied by the head. Prolonged labor with marked moulding is necessary before thorough engagement is effected. Narcotics should be given to promote the comfort, and defer the period of exhaustion of the patient, but in many cases exhaustion supervenes before the head has passed the brim. Forceps to the side of the pelvis would grasp the neck below the occiput on one side and the top of the head upon the other. If applied one anteriorly and the other posteriorly to the head, the pelvic curve of the blades would carry their tips too near the occiput, while if this is prevented by carrying the tips toward the occipital side of the pelvis, the blades will be perpendicular to the base of the head. Downward traction would tend to produce slipping of the blades, while traction in the axis of the blades would pull the head against the obstructing promontory. By using any of the applications recommended in textbooks

disaster is courted and it is not surprising that those who have not solved the mechanical problem of such a position look elsewhere for a way out of the difficulty. By ignoring the time-honored rule that "the concave edge of your blades must be turned toward that part of the head which must ultimately come under the pubes," and applying the blades in the reversed position, with their concave edges toward the top of the head, their pelvic curve will carry them in the general direction of the long diameter of the head. By pulling in the axis of the blades the occiput is made to hug closely the side of the pelvis. Great force is not to be used and the head is gradually moulded into the brim. The deeper the engagement effected, the narrower the portion of the head nipped by the conjugate becomes, and the greater the portion of the pelvis which can be utilized. The application of the blades described is not difficult and the necessary maneuvers will be briefly described.

It will be assumed that the head is violently flexed with the occiput attempting to enter the pelvis to the left of the promontory. The only difficulty is that, unlike the manipulation for canting the head past the promontory, no free space exists for the passage of the anterior blade, which must, in this procedure, round the occiput. The left blade is introduced posterior to the head with its tip pointing toward the left sacro-iliac joint. The two fingers of the right hand, which have served to guide it between the lip of the cervix and the head, are placed upon the convex edge of the blade at the lower end of the fenestrum. The left hand of the operator, in addition to executing a spiral movement, rocks the blade, keeping it free of the head and pelvic wall, while the internal fingers, in addition to acting as a fulcrum, press the blade in the direction it must travel round the occiput and up behind the left ramus of the pubes, where it is applied upon the long diameter of the head, its edge paralleling the zygoma. The right blade is insinuated upon the flat between the posterior side of the head and the posterior lip of the cervix, and, by depressing the handle, it is made to glide along the posterior parietal parallel to the base of the skull until its tip overlaps the frontal.

An instrument with a gradual cephalic curve is best for such an application and the lower end of the fenestrum should be narrow, else the edge of the blade may impinge upon the lateral pelvic wall. If one once acquires the theory of such an application of the forceps there is no difficulty in putting it into practice. With this application of the blades, whether you use an axis traction forceps or not, if traction is made in the axis of the blades and haste is avoided, great force is not required to effect engagement. No movement of rotation should be imparted until the head is in the pelvis, else the posterior temporal or frontal will be depressed by the projecting promontory.\*



## FACE PRESENTATIONS

A third antero-posterior application of forceps, in or about the brim, I have used with great satisfaction in face presentations caused by this same type of pelvis. In these cases also a moderate head curve is best and a long blade with divergent shanks had best be avoided. With the forehead attempting to engage in one-half the pelvic brim the chin is always a little posterior to the transverse diameter of the pelvis, while the face imperfectly fills the other side of the pelvic brim, leaving ample space for the anterior blade to be worked past it. Most of these cases present with the forehead in the left half of the pelvic brim, while the long diameter of the head is obliquely placed, so that the occiput is nearer the left side of the mother than the forehead. It follows that if the blades are applied antero-posteriorly, the left blade behind and the right blade in front, if the lower ends of the fenestra embrace the anterior end of the head a little above the zygoma the pelvic curve will carry their tips in the general direction of the occiput. The anterior blade may be easily palpated through the abdominal and uterine walls, and, if accurately applied to the long diameter of the head, and the posterior locks with it, your application is both safe and secure. Gentle traction in the axis of the blades secures a gradual moulding of the head into the pelvis. The deeper the forehead enters the pelvis the narrower the base of the skull becomes and therefore the more the head can move *en masse* toward that side of the pelvis which is but partially filled by the face. When the forehead approaches the pelvic floor the handles should be swung in the arc of a circle\* to bring the chin forward.

In the last two types of labor the head does not attempt to enter in the axis of the pelvis but chiefly through one-half of the brim. Traction in the theoretical axis of the brim would not be traction in the direction of least resistance. If the blades are applied in the axis which the head must travel to escape the special obstruction you have ideal prehension. If such prehension is secured, traction in the axis of the blades is ideal traction, for that individual case, yet the axis of the pelvis must not be ignored, and, as the blades lie antero-posterior in the pelvis, special traction apparatus will not assist, but if one directs his traction parallel to the posterior surface of the pubic joint, the pelvic axis will be closely approximated.

## TYPES OF FORCEPS

Since writing the foregoing more than seventy textbooks have been consulted in order to be sure that my arraignment of authors is justified. In not a single instance are the principles of forceps application adequately set forth. The nearest approach to it is in the old work of David D. Davis, 1841, and his rules would not apply to modern practice. Almost any curved instrument with a sufficient length of shank can be applied as de-

scribed in any of the conditions considered, but for the operation of canting the head past the promontory a moderately narrow blade is best, and a super-imposed shank adds greatly to the success of the maneuver. The divergent shanks of Tarnier not only would restrict greatly the movement necessary to effect rotation round the promontory, but would increase greatly the trauma to the mother's soft parts in any of the procedures indicated at the brim.

The requisite for an easy introduction of the blades under these circumstances are the following: The blade should have a moderate width. Its widest part should be near the tip, while the lower end of the fenestrum should be narrow, the posterior edge being continuous with the shank. If the widest part of the blade is near its tip the operator knows exactly the point where resistance is met with and having overcome it the remainder of the blade will follow without difficulty. Davis, who was the father of the wide lower end of the fenestrum, recognized the difficulties of its introduction under some circumstances, and the dangers of a projection of the lower edge of one of the blades, and devised a special blade to avoid these dangers, yet his followers seem not to have followed him in this thorough study of the subject. Lusk even adopted the Davis blade in his modification of Tarnier forceps, which some textbook authors refer to as the best form of that instrument, but Davis would never have countenanced the use of his blade for such a purpose.

Traction is entirely exerted by the upper half of the forceps blade, and either a broad divergent shank, or a projecting edge of a fenestrum behind, both lessen the ease of application of forceps and increase the chances of maternal trauma during delivery. Any instrument which is useful in cases of disproportion should have blades no thicker than necessary to give it the requisite firmness, and the instrument of Tarnier is from the mechanical standpoint, least adapted to fill these indications of any instrument I have seen. He who uses it exclusively for difficult forceps work must, of necessity, place limits for the operation which have no existence for him who exercises better mechanical judgment in the selection of his instrument. If one must use an instrument with separate traction rods, some of the axis traction modifications of the Simpson forceps will be found as much superior to the Tarnier, as was the original instrument of Sir James Y. Simpson to the classical French forceps. I have barely scratched the surface of my subject in this paper and have been compelled to merely assert many propositions which, if time were available, are susceptible of mechanical proof, but if I have succeeded in stimulating a desire among members of this section to study the mechanics of forceps application, my object will have been accomplished.

\*Note. It is understood that in every case where the blades are applied in the reversed position they are to be reapplied after the lead is in the pelvis.

## Lesions of the Prostate\* and Their Treatment\*

H. P. Pomerene, M. D., Canton

**Editor's Note.**—Dr. Pomerene is so convinced of the sociological effects of prostatitis that he is inclined to credit the present disturbing throes of the World to a prostatic peace. Be that as it may there is no doubt that the present tendency to delay radical relief to those suffering from the consequences of enlarged prostates does materially increase the discomfort of declining years. It is not advisable to base operative interference only on the results of laboratory tests. Clinical examinations and subjective symptoms will usually serve as true guides to operation. The punch operation of Young is not used as frequently as indicated for handling the bar of the prostate. Irrespective of the lesion involved prostatectomy would seem justified because it relieves such intense suffering, restores essential physiological activity and adds from 15 to 20 years to the span of life. It is no longer associated with a prohibitive mortality and the supra-pubic technique enables the operator to avoid accidents and conserve sexual power and urinary control.

**I**F you accept early prostatectomy then old age will have been deferred and the longevity of man increased with its golden era of power and wisdom and vision. The Peace Treaty and the Prostates at Versailles were incompatible with accurate, continuous deliberation. The urinary interruptions spoiled Justice by disassociation of ideas. The hand urinals and the "*Hall of Mirrors*" were inharmonious and inartistic; hence the world is in the disturbing throes of a prostatic peace, and the League of Nations with its "*spark*" in Washington now has illuminated the whole world and the oppressed peoples of smaller nations with the same brilliancy as a phosphorescent fire-fly!

### SOCIOLOGICAL ASPECTS

We have a propaganda for Cancer; we must have a propaganda for Prostates, by which the productive activity of man is handicapped ten to fifteen years. The loss to the community is enormous; the loss to home comforts is incalculable. The bedroom of a prostate is like the stink-pots of China, which neither the attar of roses, nor the perfumes of Arabia efface. This is the objective state; the subjective state extends beyond expression.

I bring to you nothing new and nothing scientific. I exhort you to awake to the irreparable pathology produced by the neglected prostate. If its revelations spur you to duty, then the *object* of this paper is attained. The same hands that were raised against prostatectomy defied appendectomy. In old age examine the rectum more and the mouth less. So-called vesical and nephritic diseases have a prostatitis back of them.

The prostate is the young man's friend and the old man's foe; the ejaculator of the pleasures of youth and the contributor of the wreckage of age. When the gall bladder is obstructed, the ghost of jaundice and pain drives us to surgical suggestion; an obstructed ureter is urged to see the best man; an obstructed appendix is allowed to make less inroads in pathology, but an ob-

structed prostate is allowed to produce a tragedy of wrinkles; a bent figure; an exhausted physis; an infected system; groaning pains; burning urination in the still and chill of night, all the while pillowed in the agony of distress. These conditions progress and culminate in the Verdun of physical and mental disaster of what would otherwise be a graceful old age.

### THE TENDENCY OF DELAY

The tendency in Europe is to treat non-surgical diseases of the prostate; much so in this country. Residual urine and infection are allowed to make degenerative changes in the kidneys and other organs; many cases develop uraemia before radical measures are resorted to. Always operate upon cases of persistent residual urine, but there must be a preparatory treatment in residual urine, infection, uraemia, lithiasis, and in atony of the bladder; fill up the empty sclerotic blood vessels; drain and then operate. A question comes as to the degree of residual urine—two to three ounces is the limit. Drainage produces loss of weight, headache and nausea. When these improve, operate.

Many fine chemical tests are made to estimate renal insufficiency. The urea output, also the use of phenolsulphonethalein, which is perhaps the best test of functional activity. If its output is above twenty per cent in two hours after administration, renal function will permit operation. Twelve per cent is unsafe, forty per cent safe. An infected kidney also gives a high test and is unsafe surgically. Therefore, remember the exception. The chemical refinements are illuminating to talk about in medical society, and also are more terrifying than practical. Just as years ago leucocytosis kept many men from doing an appendectomy because they could not estimate the leucocytis. When the whole country becomes a medical college, and the whole profession becomes a team-workshop, and when man loses his faculty of observation and his sense of touch, then each patient can be decorated with the niceties of the laboratory. *But where the owl is, the laboratory is not. Standardized methods must be evolved practical to every man everywhere. We believe in func-*

\*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.



tional tests, where possible, but clinical examinations and subjective symptoms are a true estimate to operation and their improvement is the guide, with the returning weight, good appetite, good feeling and normal specific gravity. However, if symptoms remain the same, never better or worse, we may then operate. Don't operate with specific gravity under 1015 to 1011. Don't operate in acute retention. Don't operate with no residual urine, even if there is a large prostate. Don't operate with an epididymitis or acute cystitis—the patients die. Preliminary treatment is the *ne plus ultra* of success; it lessens mortality, clears urine, restores specific gravity, diminishes blood pressure and fills up old arteries. In other words, you restore the resisting power and tank the system for the firing line.

#### HANDLING THE BAR OF THE PROSTATE

Pus in the urine usually means pyelonephritis. Drainage of ten to fourteen days, or even three months may be necessary. If a stone is in the bladder with infection and residual urine, drain before operation. Remove the obstructing prostate in atony of the bladder, in dilated musculature of the bladder, in enlarged median lobes, even if the lateral lobes are normal. The Bar of the prostate which signalizes vesical distress without enlargement of prostate must never be lost sight of, and must be incised. Randall of Baltimore found, out of three hundred cases of prostatic necropsies, eighteen per cent had median bars, fibrous and glandular. Young and his punch operation have stimulated the surgical relief of prostatic bars beyond all others. Great care and exact preparation reduces the mortality, and, remember, there is no such thing as an emergency prostatectomy, and no man is too old to receive its benefits.

#### DEVELOPMENT

When we invite your attention to lesions of the prostate, we invite you to the consideration of a pathology. A lesion is the pathway to a pathology, to an infection, to a hyperplasia, to a neoplasm. In the twelfth week of uterine life the prostate gland originates from five groups, in all, twenty to seventy tubules. At the lower end of Mullerian and Wolfian duct, the groups of buds of Pallin originate and form the prostate. Thus the prostate is with us for pleasure or pathology very early in our career and dominates our entire existence. The groups of tubules originate from evagination of urethral mucous membranes. In the beginning are five lobes; the middle lobe is between the bladder and the ejaculatory ducts. The lateral lobes are at the sides, back of the urethra. Any lobe may enlarge independently.

#### LESIONS OF THE PROSTATE

The most common lesion of the prostate is

adenomatous hypertrophy. It is universal after fifty years, but produces symptoms only in thirty-four per cent of cases. The degree of development varies from one to several adenomas. Sometimes a single adenoma in the middle lobe produces most marked symptoms. The posterior lobe is seldom hypertrophied, but cancer always begins in the posterior lobe and produces no symptoms until late, as fibrous tissue separates it distinctly from the lateral lobes. (Cancer of the prostate of the father is said to be analogous to cancer of the breast of the mother.) Primary cancer is small and grows in the way of least resistance, passing back to the trigone and seminal vesicals before it encroaches upon the urethra and bladder, and then produces symptoms, vesical as well as hypertrophic, of the lateral lobes. It is this hypertrophy that may be enucleated and relieve the patient, without disturbing the carcinoma. In a few cases there is a generous carcinomatous infiltration which is hopeless and not removable. A late cancer disseminates all lobes and is infiltrative and not ulcerative. Sometimes pelvic neuralgias and sciaticas are infiltrative from cancer of the prostate. Prostatitis and prostatic abscess resemble malignancy. The late differential diagnosis of these conditions gives to surgical effort only temporary relief. According to Mayo, fifteen to twenty per cent of all cases of enlarged prostates are cancers. Küemmel reports twenty-one per cent of his cases as cancers. Gëble (Münich) reports 38 per cent of cancers. Young 21 per cent cancers. Wilson and McGrath, 15.5 per cent cancers. About seven years ago most surgeons advised against operation in cancer of the prostate, because incontinence of urine always followed. Judd said incontinence was an insuperable objection to operation, but the ingenuity of Young devised the operation of preserving the antero-lateral fascia, with the effect of procuring continence. Don't operate if cancer has passed back of the trigone. Cancer is more painful than hypertrophy and does not interfere so soon with urination. The pain radiates to the back and legs. Pains of cancer grow steadily with retention and urination is more frequent in cancer but not so painful as in hypertrophy. Hematuria occurs in 21 per cent of cancer cases.

Hypertrophy and cancer cannot always be differentiated, neither by physical signs, or contour, or size; both may be hard; both nodular; both inflammatory. Only twenty-five per cent of cases are plainly diagnostic; 75 per cent difficult or impossible to differentiate. Always suspect a difficult enucleation. Radical operation cannot be done in late cancer cases. Advise the use of the catheter unless its use is very painful.

#### IS THERE AN ARGUMENT AGAINST PROSTATECTOMY?

Is there an argument against prostatectomy? The prostate has a definite function. It secretes

a fluid essential to life and the motility of the spermatazoa. It is rich in nerve-end organs and connects with the testicle. The removal of the testicle causes atrophy of the normal tissue of the prostate, but does not cause atrophy of the hypertrophy. The sexual power remains the same. Urination becomes normal after removal. It is not a question of family. The age factor is beyond that.

According to Mayo, there are

17 per cent of hypertrophies before 60 years;  
50 per cent of hypertrophies from 60 to 70 years;

30 per cent of hypertrophies from 70 to 80 years and,

3 per cent of hypertrophies after 80.

Thus 83 per cent of patients with hypertrophies are above 60 years of age; 78 per cent of these are married; 18 per cent of these widowers, and 4 per cent are single.

Judd reports that out of 542 cases 407 were married; 94 were widowers, and 11 patients were single. Thus virtue and abstinence have their own reward and the matrimonial bed produces 96 per cent of hypertrophies. But the married man may say the etiology of hypertrophy is pathologic of senility, analagous to uterine fibroids, inherited, the result of gonorrhoea, rheumatism, gout, infection, or any other nebular hypothesis.

From the foregoing pathology these patients are medically hopeless and surgically neglected and theologically prayed for. Prostatectomy relieves intense suffering, restores essential physiological activity, and from a utilitarian and humanitarian standpoint should be done. It adds to the span of life fifteen to twenty years. The operation badly done is an earthquake to the system, expertly done is a salvo of comfort with a returned vigor of youth. Diligent care evolves a high percentage of cures. Freyer of London had fifty-five deaths in one thousand cases. A personal letter from Young of Baltimore gives his mortality as 3.5 per cent. In twenty years the mortality has been reduced from 20 to 3.5 per cent, and will be reduced to 1.5 per cent by a knowledge of essentials; by accurate diagnosis; by accurate pre-operative and post-operative treatment, consisting in heart toning, functional correction of kidneys, lessening infection and residual urine and instituting a two-stage operation,—first, drainage and then enucleation.

#### INFECTION AND THE TYPE OF OPERATION

Judd says most infections in prostatic cases are due to colon bacilli. Cabot says immunize the patient with colon vaccine,—but can it be done? Rostrum philosophy many times fails. Cabot and Crabtree obtained results from colon vaccine. The Mayos tried colon vaccines for five successive months and five months without and found the controls did better than those with the

vaccines. With the vaccines there were 5 per cent more cases of pyelonephritis and 10 per cent more cases of epididymitis. Cabot and Crabtree found colon bacilli in the reactions after removal of residual urine. The Mayos did not. *Thus always great minds like the elements in nature, are antagonistic and disintegrating.* The very fact of colon bacilli infection helps to establish the type of operation against the perineal. The type of operation is supra-pubic and not perineal. As Dr. Deaver often says, "Seeing is believing." The supra-pubic operator has the operation under the eye. The perineal surgeon relies on the sense of touch. The punch and perineal operation should be left to the marvelous touch of Young of Baltimore,—that wizard of prostatectomy. Our anatomic knowledge gives the supra-pubic the right-of-way. Tandler and Zukerkandle, in a large series of investigations, found, without exception, that hypertrophy develops towards the bladder. Therefore, why take the cork down through the bottle to remove it, as in the perineal operation. Also, the supra-pubic procedure has no fistulas, no catheters, no relapses of symptoms, no loss of sexual power, no epididymitis; patients can control urine and the result is anatomically correct. With such results we must become converted more generally to the operation and an early operation is as imperative as in appendicitis and gall-stones.

#### CONCLUSIONS

The tales of suffering that come from the household of the prostate must be answered unto. The unrest of the nursed and nursing appeals to you. It disrupts the entire family and emphasizes the lethargy of the profession. Its infections are condemnatory of duty and a catheter life is hellish. To ask a patient in the prostatic night to carry a catheter life is conscienceless, compassionless and devoid of wisdom. The prostate improvises its victims, saps their strength; vulgarizes the home and makes a mockery of modesty. Therefore, in the name of the body which it polutes; in the name of the home which it despoils; in the name of religion which it disgraces, let us paraphrase Lady Macbeth and say "Out, out, damned prostate, out I say."

#### DISCUSSION

DR. W. D. HAINES, (Cincinnati): After examining the literature one is lead to the conclusion that the diseased prostate has hitherto been regarded in the light of a subject of oratory for the surgeon, rather than as a menacing pathological hazard to the patient.

Fibromata, myomata and malignant neoplasms, local expressions of terminal infection, comprise the greater number of lesions of the prostate. Perhaps in no other anatomical location do we find a more potent expression of the far reaching influence of mechanical interference with function than is exhibited in prostatic lesions ac-



accompanied by marked increase in size of the gland.

The prostate is a derivative of the mesoderm and is developed very early in foetal life to almost entirely disappear before the permanent gland structure is laid down. The real gland has its origin in the epithelial cells lining the urogenital tract. There are two segments developed about the vestigial remains of the primitive node which finally fuse and completely surround the prostatic urethra. Recall this arrangement in discussing removal of the gland without injuring the prostatic urethra.

The prostate is subject to invasion by all forms of germ life but the gonococcus is the usual type encountered although it is not infrequently complicated by the presence of *B coli communis*, staphylococci and streptococci.

Invasion of the gland takes place through direct continuity in urethral infection, through traumatism; the blood stream and lymph channels. An active inflammatory process of the prostate due to gonococci or other pus formers produces a sense of heat, weight and pain in the pelvis which radiates down the thighs. Severe chills, high fever, restlessness and great prostration are followed by frequency, stranguary or suppression of urination, rendering the patient very miserable and adding to the gravity of his condition. The process not infrequently follows the usual cycle observed in other tissues in their attempt to arrest or limit the invasion of pus formers—swelling, pressure necrosis, suppuration.

When an abscess forms it may perforate into the urethra or bladder, and the pus be discharged with the urine; rupture of the abscess into the rectum is another favorable termination of the neglected case; cases, however, have been recorded wherein the pus burrowed upward into the peritoneal sac and caused fatal peritonitis. Septic thrombophlebitis in the prostatic sinuses accompanying infection of the prostate may induce general pyemia or end in local infarcts in the lung, brain or kidney.

The prostate is fixed rather firmly in its position by attachment to the triangular ligament and further supported by the levatores ani and pelvic fascia. It is made up of granular, fibrous and muscular tissue and enveloped in a strong, smooth capsule. The capsule dips downward along the median fissure blending with the stoma and acini of the gland, and is a very important factor in determining the outcome in infection of the prostate.

If the acute process subsides without suppuration, and by far the greater number of cases do, chronic inflammatory changes of a permanent and damaging nature ensue.

There are numerous individuals in our midst who are commonly designated as "nuts" whose mental and physical handicap is solely dependent upon a chronically infected prostate, the removal of which would restore them to useful citizenship. In neglected cases one encounters many physical complications including diabetes, renal and cardiac insufficiency, residual urine, acute retention, constipation, impaired digestion and faulty elimination.

Prominent, perhaps foremost, are damaged kidneys, heart and impaired nutrition, interstitial nephritis with impending anuria, heart lesions with compensatory relief at low ebb and rapid loss in body weight are frequently encountered.

The successful management of a patient suffering from chronic hypertrophy of the prostate will depend more upon a broad grasp of the physical conditions which confront the examiner

and his ability to cope with them, than to measures addressed directly to the diseased gland. Perineal drainage will relieve the pus cases and should be instituted at the earliest possible moment after the presence of pus has been determined. One should always admonish the patient of the possibility of a persistent fistula following the operation if the infective agent is the tubercle bacillus.

In the chronic cases with obstructive symptoms the indwelling catheter, breathing exercises, bathing, massage, outdoor exercise, tonics, proper feeding, removal of focal infections and other physical and therapeutic measures, adaptable to the individual patient will render a large number of these patients comparatively safe surgical risks.

If the catheter cannot be introduced, a suprapubic cystotomy becomes imperative in the acute retention cases as a preliminary to prostatectomy.

### New and Non-Official Remedies

*Staphylococcus Vaccine (Albus and Aureus)* (Gilliland.)—A staphylococcus vaccine (see New and Non-Official Remedies, 1920, p. 288) containing *Staphylococcus albus* and *Staphylococcus aureus* in equal proportions. It is marketed in packages of four syringes containing, respectively, 250, 500, 1,000 and 2,000 million killed bacteria in 1 Cc.; also marketed in packages of four ampules containing, respectively, 250, 500, 1,000 and 2,000 million killed bacteria in 1 Cc. The Gilliland Laboratories, Ambler, Pa. (Jour. A. M. A., Feb. 7, 1920, p. 393.)

*Formicin Omitted From N. N. R.*—Formicin, manufactured by Kalle & Co., A. G. Biebrich a/Rh, Germany (Kalle Color and Chemical Co., New York, U. S. agents) was admitted to New and Non-Official Remedies in 1912. The Council on Pharmacy and Chemistry reports that while the claims recently made for Formicin were essentially those made when the product was first accepted, these claims were questioned because further experience had not established the usefulness of the product. As the Kalle Color & Chemical Co. presented no evidence to establish its therapeutic efficiency, the Council directed the omission of Formicin from N. N. R. (Reports Council Pharm. & Chem., 1919, p. 76.)

*Pneumococcus Vaccine Immunizing* (Gilliland) A pneumococcus vaccine (see New and Non-Official Remedies, 1920, p. 286) containing Types I, II and III, respectively, in equal proportions. Marketed in packages of four 1 Cc syringes, and also in packages of four 1 Cc. ampules, containing 250, 500, 1,000 and 2,000 million killed pneumococci per Cc. The Gilliland Laboratories, Ambler, Pa.

*Pasteur Anti-Rabic Vaccine* (Gilliland)—An anti-rabic vaccine (see New and Non-Official Remedies, 1920, p. 272) prepared according to the method of the U. S. Public Health Service. The treatment consists of twenty-one to twenty-four doses and these are sent separately each day by special delivery. The Gilliland Laboratories, Ambler, Pa.

## Acne Vulgaris\*

Charles J. Shepard, M. D., Columbus

Editor's Note.—Acne vulgaris is one of the most disfiguring and intractable diseases of adolescence. Both sexes are equally affected and the condition is prone to persist even in spite of continued treatment. It is the sort of condition that the general practitioner encounters in everyday practice and it is up to him to be able to do something to check the inroads of this dermatosis. Dr. Shepard outlines a very simple but practical course of treatment, which if conscientiously used will do much to clear up the condition.

**A**CNE Vulgaris is not only one of the most common of dermatoses, but is also one of the most disfiguring and intractable. It is an inflammatory affection of the sebaceous glands resulting in a multiform eruption symmetrically distributed over the face and back, with occasional lesions on the chest and upper arms.

In many cases the eruption is scanty and transient, but the usual acne picture of a flabby, greasy skin, with comedos, papules, pustules and even superficial dermic abscesses, in various stages of evolution and involution, presents an actual disfigurement which may mar the life of the individual.

The primary feature in all cases is a comedo, or a worm-like mass of sebaceous material containing numerous micro-organisms, occluding the sebaceous or pilo-sebaceous duct and the numerous lesions of acne result from this occlusion.

### CAUSES OF ACNE

Acne is distinctly a disease of youth, beginning about puberty and lasting in untreated cases for ten or fifteen years, although often-times acne on the back persists even after thirty years of age. Both sexes are equally affected.

The probable causative factor in all cases is a micro-organism which Gilchrist has named the bacillus acne—with great numbers of staphylococci of various kinds present secondarily.

Among the many predisposing causes are youth, gastro-intestinal disturbances, uterine trouble, and nervous conditions, but it is true many cases show no abnormalities whatever.

### SYMPTOMATIC TREATMENT

The treatment internally is purely symptomatic. The predisposing cause should be ascertained, if possible, and treated accordingly. The diet should be restricted in all cases, especially limiting the ingestion of stimulating, greasy and sweet foods, and it should be taken at regular intervals. Plenty of out-door exercise with frequent baths are beneficial.

Locally the affected parts should be bathed night and morning with plenty of tepid water and soap. Ordinarily, any mild soap answers the purpose, but in some of the indurated types, green soap alone, or with alcohol, is better. Care must be taken, however, not to aggravate the trouble by too much friction. After the wash, advise the

patient to bathe the face for five or ten minutes with a comfortably hot solution of boracic acid or alcohol.

If there are any pustules present, they can be opened by a large clean needle and the contents gently evacuated, but never with the *finger nails* or *watch key*.

The drugs used externally are sulphur, bichloride of mercury and resorcin. Of the three, sulphur in lotion form is undoubtedly the best. It is usually used in combination with other drugs and usually in sufficient strength to cause a slight keratolytic action.

The selected application should be rubbed over the affected area thoroughly after the bath and allowed to remain. If the peeling process is too severe, discontinue the lotion temporarily or resort to a weaker preparation.

Supplementing the above, the physician should go over the face systematically and thoroughly once a week with a sharp pointed cataract knife and a dermal curet. The lesions should be punctured and gently squeezed and the parts bathed with alcohol or a mild bichloride solution, but care should be taken in using mercury if sulphur is being used.

*From the writer's view point this latter procedure is absolutely necessary in the treatment of acne cases.*

The haphazard prescribing of lotions and administration of vaccines is futile unless some persistent efforts are made on the part of the physician in opening the acne lesions.

Vaccines have been disappointing, probably due to the fact that many micro-organisms of many kinds are present in the eruption. When used, they should be given in connection with the methods of treatment that have been in vogue for many years.

Radiotherapy has proven beneficial in many cases, but it has apparently no curative value and certainly with its dangers should not be used except by one skilled in its use.

The mercury vapor lamp has given good results in many of our cases when used as an auxiliary. The technique is simple and the dangers nil.

### CONCLUSION

Regardless of the plan of treatment pursued, acne will prove to be obstinate, coming and going over a period of months and even years sometimes, but by persistent efforts by both physician and patient the time can be measurably shortened.

\*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.



# Observation, Management and Treatment of the Cataract Patient Before and After Operation\*

Walter H. Snyder, M. D., Toledo

Editor's Note.—Dr. Snyder is impressed with the fact that a history of stormy eyesight in childhood, following measles, will frequently be found and there seems to be a disturbed visual function during the entire life of many of those who are to wind up with the condition that we call cataract. The most important single thing to observe before operation is the condition of the pupil and its reaction to light. The patient who cannot perceive nor accurately project the position of the diagnostic light must be warned that the operation, although worth while, will not result in as good vision as he desires. The whiter the eye and less congestion in the lids, the better the result that may be expected from surgical intervention. Dr. Snyder has found the sterilization of instruments in boiling, neutral light hydrocarbon oil very satisfactory, not only in conserving temper but also in obviating post-operative infection reactions. He has found afternoon operation and comfortable beds of value in assuring patients a good first night. Dr. Snyder also details a method of postoperative dressing and care that hastens convalescence and obviates the disadvantages of the old promiscuous use of atropin and sodden wet dressings.

THE care of cataract should start, if possible, months before the actual cutting is done.

## VALUE OF FAMILY AND PERSONAL HISTORY

It is very necessary to get a careful history, not only of the immediate ancestry but the collateral branches. When this is done it will be found that many in the same family history will report cataracts, and it is becoming a matter of common knowledge that these diseases of the lens seem to run in certain families. This part of the history is not necessary for the good of the patient but that we may have some exact knowledge of the condition under which it arises.

The *personal history* should be carefully taken letting the patients drift along giving their expression with as few suggestions as possible and then rearranging them in chronological order for the permanent written history. I think it is a necessity that a Wassermann should always be made. *A history of stormy eye-sight in childhood, following measles, will frequently be found and there seems to be a disturbed visual function during the entire life of many of those who are to wind up with the condition that we call cataract.* Especially should glasses be neutralized that they have used, and we should enquire how satisfactory they were, how frequently changes were necessary, what attacks of inflammation they have had, when they first noticed the failing of vision, how rapidly it progressed, what form it took, what intercurrent diseases occurred at the time and it is surprising how elaborate a history can be gotten out along the exact lines which can now be well defined.

## PERSONAL EXAMINATIONS

The most important single thing to observe of the personal examination is the condition of the pupil, and its reaction to light. This of course tests the entire visual arc and is one which is of

the greatest importance in patients who speak a language we do not understand. The quick prompt acting iris leads one to know the condition of the fundus almost as well as any test could tell us, but where it is possible we should make finer and more delicate tests of light perception and projection. By this I mean using a small light 5 or 10 mm. in diameter in a dark room and standing at a distance of 5 to 10 ft. and having the patients point towards the light, shifting a few inches at a time, up and down, right and left. This would give you an excellent idea of the presence of macular scotomas which sometimes have been found to render the post-operative vision almost useless after a beautifully executed operation. *The patient who cannot perceive nor project accurately the position of the light, must be warned that the operation will not result in as good vision as he desires, although worth while.* This all has to do more with the prognosis of the operation than its successful completion.

The next thing we examine is the condition of the cornea for fine scars or opacities, all of which may be hardly noticed by a patient with an already partially cataractous lens but which when we come to fit glasses for normal vision will cause a serious reduction in the vision.

The next thing is to examine the lacrimal apparatus and drainage of the eye. This usually is patent enough for surgical purposes but one should determine this as positively as can be done by fluorescein or argyrol, staining the handkerchief or by flushing the eye after dilating the punctae which in cases which need conjunctival treatment should always be done. The rapidity with which a conjunctival infection clears up after dilating the punctae is very noticeable over the ordinary treatment. When we first see a cataract case we dilate these punctae, treating them with a weak solution of silver, (one grain to the ounce), and then have them use hot applications followed by flushing with a boric solution.

*The whiter the eye and less congestion in the*

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

*lids, the better the result that may be expected from the surgical side.* The tension is taken and the scleral toughness of age is not confused with the increased tension of chronic simple glaucoma. I am not a believer in operating on new cataract cases the day they are first seen or even a few days after. Most of them would be benefited by a course of treatment which includes a reasonable study of their excretions and hygienic habits.

While the presence of sugar in the urine does not contradict the operation, it is well for the surgeon to know it and I have no hesitation in operating on cases which have shown four and five per cent. of sugar but I wish to choose my time for the operation. The use of glycerin in the eye to relieve the congestion has been useful and in many cases clears up the anterior congestion very quickly.

#### THE PRELIMINARY REGIMEN

We will suppose now that the patients have been properly instructed in the care of the eye and we have decided to do the operation at a certain date. My habit is to have my patients in the hospital a day or two before the operation and if they wish the operation done without their knowledge, we require usually a week for this. During this time the night nurse observes their sleeping qualities, coughing, restlessness, what sort of a bed they are most comfortable in and their general reaction to the environment of a hospital. It is my custom to operate in a special bed in the room or ward of the patient and they are trained in this, either by my nursing assistant or myself, to do the ordinary things demanded during the operation. A sign is displayed on the door to ensure quiet. The strong psychological feature of their training is that it will not pain them, that they will not be injured in any way, and that they can successfully do all that is required of them. If they are to be operated on without their knowledge, there is a long line of treatment adopted which I shall not speak of here but ordinarily, especially if the preliminary iridectomy is adopted, they are given a day or two to become acquainted in the hospital, and then the operation is performed in bed. The face is thoroughly scrubbed, the hair and eye brows trimmed and in women the hair braided in a queue centering on top of the head. The face washing in some patients is done on entrance and repeated.

I usually order a gtt. of atropin solution 1 per cent. one hour before the morphine.

It is our custom to give them an average dose of morphine about an hour before the operation. We have tried many of the drugs used for this and have finally decided on morphine and atropin as the best combination for our purpose.

During all the time that patients are in the hospital, the hot applications are kept up and occasionally the conjunctiva is touched up with

silver solution and they are not put to bed until a few minutes before the time for their morphine.

#### WINNING THE PATIENT'S CONFIDENCE

I cannot impress too strongly upon my audience the necessity of completely winning the confidence of the patient. Unless this is done by a certain amount of familiarity with the doctor and his methods, they will resist or attempt to rely upon their own resources which is apt to mean a squeeze or shrinking from the technique and probable loss of vitreous. We do not tell the patients they are being trained for the operation when we ask them to open the eyes, to look upward or look downward, to close them gently, to keep them closed, to allow us to put the speculum in and flush the eye without holding their breath, but this is the effect which it has upon them and those who have used this method will conclude with me that the successful outcome of many surgically unfit cases is excuse enough for all the trouble we have, even though they are charity cases.

#### STERILIZING INSTRUMENTS

During the war the difficulty of getting instruments sharpened lead me to experiment with the sterilization in boiling oil and this was so satisfactory that I have continued this practice. Any neutral light hydrocarbon oil can be employed all of which have a higher boiling point than water and the one we are using boils at 260°F. and we put in an indicator such as is used in sterilization by steam to determine when a minimum satisfactory temperature is reached. I have been astonished to note that there seem to be grades of infection and that the eyes that have been operated on by these instruments seem less reddened by the operation and subsequent bandaging than by instruments sterilized by alcohol or boiling water. The instruments are drained on gauze and passed through ether after being taken out of the oil and the edges seem almost unaffected by repeated use.

#### POST-OPERATIVE DRESSINGS

At present we are using after the operation a brown petroleum which is mixed with a light hydrocarbon oil so that it is just spreadable. This is put on the lids and in the corners of the eyes and over this a double butterfly cut of gauze also moistened with a lighter hydrocarbon, carefully smoothed out and adjusted to the face. Over this a double butterfly of cotton moistened to conform to the shape of the brows and cotton pads fastened with water adhesive plaster.

A little item we have found useful is to cut these strips long enough so that  $\frac{1}{4}$ " of each end can be turned upon its ends thus offering a finger hold in removing them when moistened. It has been so advantageous that we are doing it in all the cases now. In children, foreigners or those



who are apt to be unruly, we are putting on a figure of eight of light gauze and over this a Ring mask. On the Ring mask is a white cross made of adhesive plaster to indicate which eye has been operated upon. This is for the benefit of the floor supervisor or the night nurse who can tell by the slightest glance in the darkened room whether the patient is encroaching upon his operated eye in turning.

#### ADVANTAGES OF AFTERNOON OPERATING AND COMFORTABLE BEDS

My choice is to operate in the afternoon thus insuring the patient a good first night. If the operation is done in the morning it is my experience that the patients do not have as good a first night. They sleep during the afternoon and are wide awake at night but if done at two or three o'clock in the afternoon, there is an hour or so to recover from the slight excitement and a little smarting and after a light supper they are content to settle down and the effect of the morphine has given them a long, easy dreamless sleep and they awake refreshed the next morning. This is my reason for operating in the afternoon.

If patients are unruly or complain of their back aching, we see no objection to their being half-raised in bed or reclined on one side or the other but it is important, however, not to start this turning unless it becomes absolutely necessary, for if a patient begins by being tired on first one side then the other, they will want to be turned every half hour; while if they ignore the first few calls of fatigue, they soon become accustomed to it and fall asleep and lie quietly the rest of the night. Children will do better usually with a double starch bandage as this allows them to be taken up and held but as a rule we only bandage one eye on a child as they are terrified when they awake and cannot see. In all these cases the lids should be splinted with one or two strips of water adhesive plaster put in such away to prevent opening the upper lid.

It is very important that the bed be comfortable and I have three or four special beds and mattresses of a better grade than those ordinarily used for the comfort of my operative eye cases.

#### THE FIRST DRESSING

The first dressing is at the end of twenty-four hours, the bandage is removed but the eyes are not opened unless I note an odema of the upper lid in the inner angle of the eye. The eye having been thoroughly put under the influence of atropin at the time of operation, I do not worry about a possible iritis; I use atropin very sparingly. The first dressing is made at the end of twenty-four hours for the comfort of the patient and it is replaced without opening the lids at all.

We are very particular in using a flushing solution that is not too warm or too cold and we are using Sharp and Dohme salt tablets No. 2. One of these in eight ounces of water gives a bland unirritating solution which can be readily made and is much more satisfactory than the attempts of the nurse to make it from a brine which she uses for ordinary dilutions. I flush the eye thoroughly and it is very refreshing to have this warmed water pouring over the closed eye. This is done to both eyes and the bandage and complete dressing is replaced.

At the end of forty-eight hours the eyes are opened but nothing but the physiological salt solution is used unless there is some very special indication.

#### THE POST-OPERATIVE REGIMEN

One should constantly keep in mind that comfort means rest and rest means prompt healing. The lashes should be straightened out at each dressing. A little round pledge of cotton dampened and pressed flat should be used to wipe the edges of the lids and the adjustment of the dressing on the eye should leave the patient refreshed.

The *second day*, if there is no objection, the patient can sit up in bed and it is my custom to allow a little greater latitude each day.

The *third day* the eye is flushed freely with the warm physiological salt solution and the patient allowed to sit up in a chair. Most of my cases go through with no additional atropin except that instilled at the time of operation.

On the *fourth day* we give them the unoperated on eye. The lids will become sodden and there will be epithelial debris which it will take a little time to dislodge and clean. Usually the fourth day we use dry dressing, not even petroleum is used to moisten the gauze.

About the *sixth or seventh day* we allow one-half hour to an hour exposure of the eye to the air before the bandage is replaced and on the seventh day a still greater latitude is allowed and the eye is usually then white. The lashes are not matted down. There is no spastic entropion and the eye is at least three weeks farther in convalescence than is found by the old promiscuous use of atropin and sodden wet dressings day after day.

On the *seventh or eighth day* we make use of an eye shade. It protects the patient from the bright light, allows the eye to become gradually accustomed to use and does away with the bandage which is always a source of irritation. It also protects the eye from unauthorized handling and contact with surrounding objects.

I prefer not to have the patient leave the hospital until after two weeks. By that time the average patient has learned automatically to protect the eye and in three or four weeks the preliminary examination can be made for glasses.

# The Choice of a One-Stage or Two-Stage Operation for Cataract\*

Robert Sattler, M. D., Cincinnati

**Editor's Note.**—For a larger majority of cases of relatively far advanced, partial or complete senile cataract, favorable and ready for operation, with functional examination, urinalysis and commonly accepted surgical risks in their favor, the complete operation, in the opinion of Dr. Sattler, especially on account of the advantages of only one hospital experience, is justly preferred and has become an almost universal practice. For a much smaller proportion of this large contingent of operable cases of senile cataract, the individual experience of many ophthalmic surgeons does not, with the same emphatic or unqualified approval, recommend or justify an immediate or complete operation; and for these exceptional cases a two-stage operation is substituted.

**F**OR a larger majority of cases of relatively far advanced, partial or complete senile cataract, favorable and ready for operation, with functional examination, urinalysis and commonly accepted surgical risks in their favor, the complete operation, with one hospital experience is justly preferred and has become an almost universal practice

Experience and expediency and our ever active solicitude for our patient's safety and minimum reduction of time and expense for operation and hospital sojourn and period of convalescence, as well as lessening of our own responsibility and time, necessary to restore useful vision as speedily as possible, have gained for the one stage operation of lens extraction unqualified approval, for an overwhelming number of cases belonging to this category.

For a much smaller proportion of this large contingent of operable cases of senile cataract, the individual experience of many ophthalmic surgeons does not with the same emphatic or unqualified approval recommend or justify an immediate or complete operation; and for these exceptional cases a two stage operation is substituted.

This departure from the commonly accepted shorter management of the one stage operation. has the objection, that it involves the patient in a greater outlay of time and expense not to mention disappointment and distress of waiting and also adds greater responsibility and demands more time from the one in charge. Nevertheless for a preponderant number of this smaller group it has often proved itself a simple means of wise expediency insuring along more tedious but safer lines a more favorable final result for the patient and certainly lessens the manifold anxieties of an operator. Briefly stating my own conclusions which a longer experience has afforded me of the relative advantage of the one stage or complete operation and its two stage modification:

## GROUPING PATIENTS

The total number of operable cases of cataract under my charge with more or less favorable surgical risks, are divided into two groups.

The first or larger one, comprises subjects under sixty, in otherwise sound physical and mental condition, anxious and able to resume their wonted pursuits or occupations, with comparatively speaking rapid lens clouding in both eyes, which sooner or later or within a time period of six or eight months, forecasts probable complete ocular infirmity,—the one stage operation is almost invariably and unhesitatingly proposed and practised by me as the safest and quickest means to restore useful vision. For second or smaller group, of which a larger proportion are represented by subjects past sixty, also with fair surgical risks but with greater age and other physical infirmities in evidence, with, in most instances, an interminably slow progress of lens clouding, not forecasting a sudden or even a remote rapid advance, or complete ocular infirmity, a two stage operation is proposed and substituted. For other and special reasons also, in younger subjects, with lens defects of congenital origin to which advancing age has added other or additional incumbrances of opacification, or reduction to semi-transparency of areas formerly clear, the two stage operation of an advance iridectomy is eminently advisable. This more justifiable and expedient course of management is proposed and selected not only for the specific purpose, that it may facilitate a safer and more satisfactory lens delivery later on, but for a more valid reason, that some or many of the subjects of this group, show even on a cursory psych-analytic examination, their abnormal psychologic attitude, suggesting or upholding inferences of imminent mental imbalance or defectiveness.

## ESSENTIALS OF SUCCESS IN THE ONE-STAGE OPERATION

The technical success of the one stage operation is by me ascribed to the fulfillment of certain essentials under strictest asepsis *i. e.* a liberal periphtric incision, a clean limbed ample iridectomy and most important of all, if an extra capsular delivery is made the choice of lens extraction, a liberal stripping or spacious opening of the anterior capsule. This alone can guard against the danger unfortunately not always possible to prevent or overcome, if the incarceration of broken chips or laminae of harder and in-

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.



soluble cortical substance are concealed and wedged in at the equatorial zones. Hemorrhage and other ineffaceable impediments, which interfere with accurate vision, will defy even the most painstaking and cautious efforts of a deft operator to dislodge and remove these incarcerated masses.

#### THE TWO-STAGE OPERATION

The technical execution of the two-stage operation is a simplified modification of the former. It enables one to make a deliberate and technically more perfect excision of an iris sector and to place it more accurately directly upwards,—a later reliable guide for the large opening incision. It insures at the same time a less obstructed field of operation and above all permits a more accurate and liberal stripping with the forceps of the anterior capsule at the subsequent final extraction. If an intra-capsular lens delivery is contemplated or expedient and there is no good reason for haste, an advance iridectomy accurately placed before may prove of advantage and greatly facilitates its later complete execution; for the iris excision is also the weak feature of a one time or complete intra-capsular operation.

For the patient, owing to the elimination of iris injury, the final operation is less painful, the time duration is shorter and there is less expectancy on his part of painful happenings, as he recalls to mind that, as the advance iridectomy under the carefully induced local anaesthesia was almost a painless experience. For the surgeon again it reduces the number of instruments, lessens his anxiety of sudden or uncontrollable blepharo-spasm and affords him a more deliberate opportunity to complete the operation with greater satisfaction to himself and patient. For a larger proportion of this smaller group the two-stage operation affords us ample proof of its advantage as a measure of greater safety and expediency. It comprises subjects over sixty and pre-senile ones. Owing to a slow but inexorable process of sclerosis or dessication with increase of textural hardness and brittleness the presence of vacuoles, but with the absence of opaque striae, sectors and laminae so common during earlier periods, we find principally a general loss in degree of transparency.

#### SUMMARY

You have listened to a reiteration of known facts on a subject of perennial interest and a less ambiguous summary is added: For the majority of our total operable cataract cases which a casual estimate places at 75% or 80%, a first or one time complete operation offers the safest and speediest surgical method for the restoration of useful vision, with the least expense and shortest time, assuming that our patients have an average conservation of unimpaired physical and

mental activities, for the age period they have reached. For a smaller number, representing a group of 20% or 25%, we cannot with the same assurance and approval recommend it as securing the same more or less uniform favorable results. For this reason, individual experience has modified it by substituting an iridectomy in advance of a later final operation extraction, making it a two-stage operation. Patients of the second division are operable ones also, but often have had congenital or antecedent ocular disturbances, are often psychopathic subjects, have reached advanced age periods, with undue encroachments of age and physical infirmities and also not infrequently declare unknown psychologic tendencies forecasting mental imbalance, or imminent senile dementia at the critical period of operation or immediately afterwards.

It is an open question with me still, whether an iridectomy, a variable time period before a final extraction, is a sovereign advantage, except for the limited number referred to; but it has certainly proved itself for the smaller group (25%) in question, a sensible means of practical expediency. It is not however the iridectomy, its time or manner of execution, but the next step, of lens delivery, which should have our undivided concern. If an extra capsular delivery or capsular opening,—no matter how spacious—is made part of the technique of a modernized method of an older or classic method of lens extraction, we can never be certain that it has been completely emptied of its contents. Often in spite of the best illumination and clear operation field, the clearest vision of an experienced and deft operator, he will not be able to prevent the incarceration of wedged in masses of brittle and insoluble scales of lens corticalis. These retained masses, now equivalent to foreign bodies, and the physico-chemical changes which they induce, through liberation of lens proteins, which we all know so well, so often mar or reduce, our otherwise partial or complete successes. If in the future a successful and facile intracapsular delivery of the cataractous lens can be made a safe step or part of a modernized older technique, as free from objection, as the preceding steps of extra-capsular lens delivery of our present day ones, with only the modification mentioned, a difficult question will have its solution and the major operation in Ophthalmology will near perfection.

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#### BOOKS RECEIVED

Henry Mills Hurd, the first superintendent of the Johns Hopkins Hospital, by Thomas Stephen Cullen. Price \$1.50. The Johns Hopkins Press, Baltimore.

# Old and New Technic in Operating for Removal of Cataract\*

Derrick T. Vail, M. D., F. A. C. S., Cincinnati

**Editor's Note.**—The old or combined capsulotomy method of operation, in the estimation of Dr. Vail, is faulty because it is only applicable to ripe or nearly ripe cataract. The capsule on a live lens adheres to the cortex and when left within the eye causes a dense after-cataract worse than the original. It was this fact that lead Dr. Vail into employing the Smith intra-capsular extraction method, in the hope of preventing patients from going blind before their cataracts matured sufficiently for operation. Dr. Vail's object in this paper is to encourage those who undertake the operation for cataract to adopt Smith's method throughout in every case where the lens will show a disposition to be born without strain and to furnish a method to fall back on in case of imminent disaster; and also to teach that the best time to operate for cataract is before blindness and senility have set in. The rule Dr. Vail adopts is to operate when the patient can no longer read newspaper print with his best glasses in ordinary light.

I SHALL undertake to describe two methods of procedure in the operation for cataract, one as practiced by the majority of surgeons, the other as I do it. It will be noted that the technic of each is quite different from that of the other and I shall state in brief the reasons why I have entirely abandoned the one and universally practice the other.

In all the huge mass of literature on cataract there has been no real contribution on the principles involved in the operation since the day of Daviel. The incision is made at the limbus, the iridectomy performed, the capsule is pierced or not as the case may be and the lens delivered by external pressure today in principle just as it was in 1752 when the immortal Daviel published his first report on 200 cataract operations. The value of a paper on the subject at this late day therefore is not in teaching what to do but how to do it.

## COMBINED CAPSULOTOMY

### *The Combined Capsulotomy method:*

1. The *Incision* is made at the limbus upward comprising two-fifths or nearly one-half of the circumference of the cornea, it is started a little above the horizontal meridian and completed in such a way as to leave a small tongue of conjunctiva clinging to its summit. This is turned down on the upper part of the cornea with the back of the knife.

2. The *Iridectomy*: Iris forceps are passed (closed) into the anterior chamber, the iris is grasped near the margin of the pupil, withdrawn and snipped, producing an upward coloboma.

3. The *Capsulotomy*: The Capsulotome enters the anterior chamber, point flatwise, while the patient looks down, until the cutting end is passed behind the iris at the lower border of the pupil, then the instrument is turned so that the tooth-like point penetrates the anterior capsule when it is withdrawn in this position thereby cutting the anterior capsule deliberately and in a vertical manner in the axis of vision. This maneuver is repeated perhaps on each side the

central cut, and finally a cross cut or cross tear is made at the upper part of the three cuts (more or less) thus creating "slashes" as dressmakers call them. The idea is to furnish outlet for the lens-nucleus and as much of the cortex as will pass and at the same time leave an opening in the capsule in the axis of vision. The entire capsule is left within the eye. Its anterior leaf is riddled or cut in ribbons that may curl and retract but will never absorb.

4. The *Delivery*: The lens-nucleus is expressed and as much of the cortex as will glide out with it, by making pressure or indentation against the cornea below the center of the pupil while the patient looks down. A Daviel spoon or corneal curette is used for this purpose.

5. The *Toilet*: A curved spatula is used to replace the angles of the coloboma, the flap of conjunctiva is smoothed out on the sclera above the incision, the upper lid is lifted off the globe by means of the finger and thumb grasping the lashes while the patient is told to close his eye and keep it closed.

## ADVANTAGES

There is no operation in surgery more beautiful, more daring or more inspiring than this as executed by a calm surgeon with steady hands when the patient is obedient and tractable. Moreover the result is so satisfactory that the surgeon goes home happy in the assurance he has performed a good operation and he feels that if iritis, or glaucoma, or iridocyclitis, or infection, or an unusual accident to the eye does not occur, his patient will have his sight restored. Since he knows that less than 1 per cent. has infection, less than 10 per cent. have post-operative iritis, less than 3 per cent. iridocyclitis, less than 3 per cent. glaucoma, less than 5 per cent. other complications, he rests with the hope that the case will be one of the 80 per cent. (more or less) which goes on to a perfect result. True an after-needling may be required but statistics show this small operation is more of a nuisance than a danger.

## THE ONE FAULT

Why should anyone desire a better operation?

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.



Personally I would desire nothing safer or better than the above briefly described operation if it were not for one fact. That fact does not embrace the incidence of iritis, or glaucoma, or infection, or iridocyclitis, or accident to the eye, or any of the unusual complications, nor does it include the needling. It is founded on an entirely different need, a need that is real, and not met at all by the above described operation, a need that the public has a right to ask us to meet in this day of progress.

Wherein then, is the above-described and almost universally practiced operation today faulty? *It is faulty because it is only applicable to ripe or nearly ripe cataract. The capsule on a live lens adheres to the cortex and when left within the eye frequently causes dense after-cataract, which is far worse than the original cataract.*

Personally I felt for many years before I ventured to adopt any other method, that patients, beginning to go slowly blind with cataract, had a right to expect us to devise a method that would be as good as the foregoing one if not better and which would put an end to the suspense of waiting year in and year out against the time when their cataracts are ripe or indeed until they are side tracked in the race of life from blindness. As I have exploited this theme elsewhere (see "*Newer Principles in Dealing with Uncomplicated Cataract*," Knapp's Archives, Vol. 45, p. 307, 1916) I shall not dwell upon it here.

#### INTRA-CAPSULAR EXTRACTION

In response to this demand I have adopted the following method. It will be seen at once that this technic is that for intra-capsular extraction taught by Lt. Col. Henry Smith, now of Amritsar, India, with however one important modification of my own to be employed in those cases (regardless of whether the cataract is immature, mature or hypermature) where the lens for any reason refuses, without undue pressure or strain, to detach and come away when coaxed to do so with Smith's expression hook applied properly to the lower part of the cornea. *My experience in the newer technic has brought me to believe that it is reprehensible to allow the patient to go blind from cataract before operating.*

#### OPERATIVE TECHNIC

The method I pursue is as follows and is adaptable to any kind of operable cataract regardless of ripeness: (See References).

1. The *Incision* is purely corneal and is made upward. It starts in the limbus and the blade passes across in the horizontal diameter of the cornea exactly. When near completion the edge is turned forward to emerge one or two mm. below the upper limbus, entirely within the cornea. It will be noted that this incision begins lower down and ends lower down than that described in the previous operation and is a little but not

much larger, the ends being wider apart at the start. By cutting the cornea through its greatest horizontal dimension there is no strain invited when the lens passes through as may occur when the incision is started in one of the shorter horizontal lines.

2. The *Iridectomy* may be performed in the same way as that described above but Smith half-opens the iris forceps, descends the blades vertically to the wound in such a way as to make the lower end press the cornea below the incision, while the upper end is placed opposite the scleral side of the cornea, the idea being to gently force the iris out of the wound to be grasped and incised. His purpose in doing the iridectomy in this way is to avoid entering the eyeball. The only instrument that enters the aqueous chamber in a truly Smith operation is the knife blade (exception noted below in "toilet"). At this point the speculum is removed and the upper lid hung on my lid retractor (see Reference 5) and held there by the assistant till the end of the operation.

3. The *Delivery* of the lens in its capsule is now in order if that is possible to accomplish without strain. The bulbous end of the lens-hook of Smith is applied to the cornea opposite the lower fourth of the lens and at the same time the elbow is applied on the lower rim, of the cornea; thus the turned end of the hook lies flatwise on the eyeball in a vertical manner with the bulbous end opposite the middle of the iris below. Then without delay the eyeball is indented or pressed upon rather boldly and without hesitation, the line of pressure being toward the optic nerve. In many cases the lens will start from its bed at once and upon seeing it do so the operator immediately shifts the pressure away from the shank and employs the bulbous tip alone to drive the lens on out of the eye. Now comes the advantage of a purely corneal incision. Since the upper end of the corneal flap must always be tucked home under and behind before attempting to secure the lens, a conjunctival flap would be a nuisance. This under-tucking of the cornea is required in order to lock the wound and prevent the lens from slipping back in the eye. The lens hook is now lifted off the cornea and used to secure the lens and remove it. This is accomplished by applying the convexity of the elbow to the left side of it in such manner that the lips of the wound are pressed together with the elbow while the lens nestles in the concavity of the elbow to be wiped or lifted away along the line of incision toward the right side where it is nudged out of the eye and left lying on the temple of the right side or the side of the nose of the left side to be secured after the toilet is completed.

#### THE AUTHOR'S METHOD OF DEALING WITH STUBBORN LENSES

When it is discovered that pressure on the



Figure 1

Illustrating Vail's anterior capsule forceps (see Ophthalmic Record Vol. XXV., 520, 1916) reduced one-third in size "A" shows end elevation. "B" shows side elevation of the part that enters the eyeball. The open blades are not properly illustrated in this cut. They open more widely (nearly 45°) and the teeth line is straight so that when closed there is perfect approximation as shown in "A".

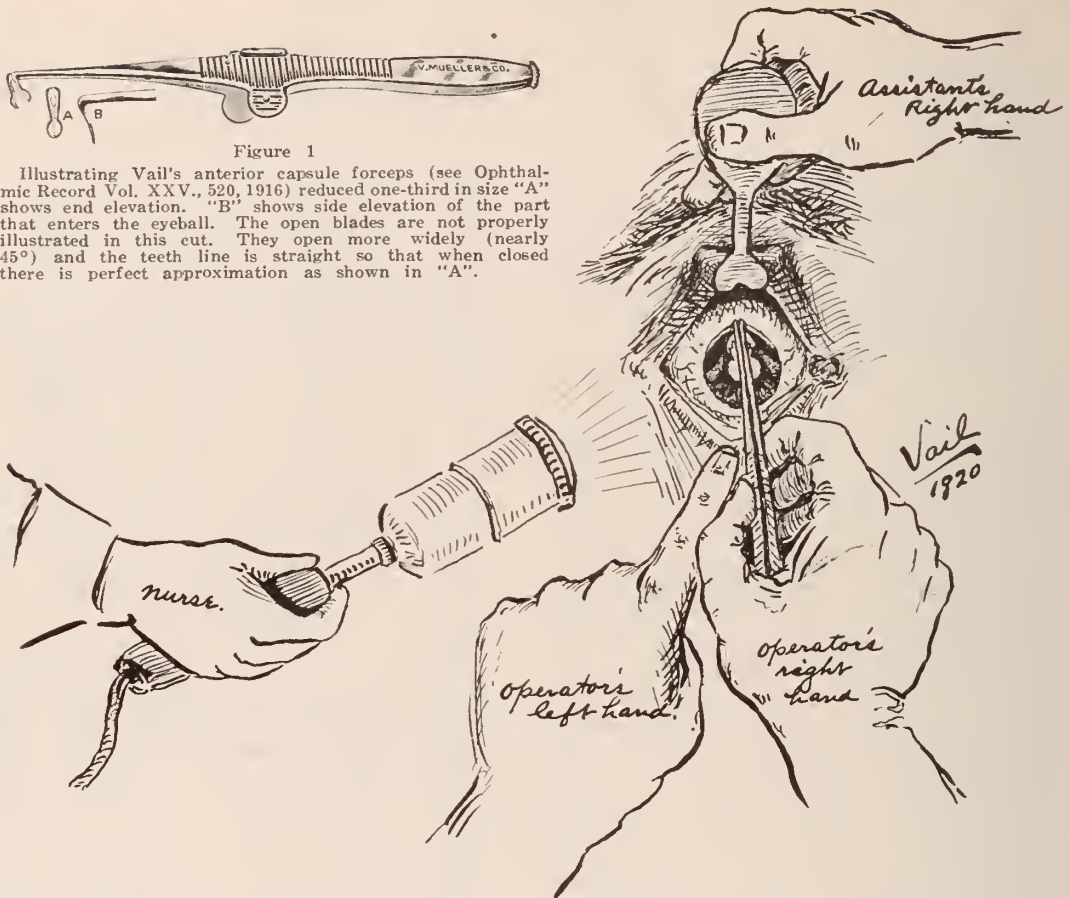


Figure 2. Illustrating the operator's view when stripping off the anterior capsule, all or in part by means of Vail's anterior capsule forceps. This illustration was drawn to show the proper position of the operator's hands, the assistant's right hand and the nurse's hand holding the illuminator. Note that the corrugator supercilii is controlled by the extended fingers of the assistant's right hand while upper lid is hung on Vail's upper lid retractor, and that the lower arm of the orbicularis palpebrarum is controlled by the forefinger of the operator's left hand while everting the lower lid. This technic prevents the patient from squeezing his eyelids during this important step of the operation. Note that the operator squarely faces the patient having shifted his position in carrying out this step to the right side of the patient's body.

eyeball with Smith's lens-hook used in the manner just described, fails to detach it and start it on its outward course I make no further effort to deliver the cataract in its capsule preferring to adopt a procedure of my own rather than to cause strain or to pass the lens spoon down behind the lens in the vitreous chamber.

My method in this emergency is to lay aside the lens-hook, direct the patient to look down, pass the closed end of my anterior capsule forceps, (see Fig. 1), down behind the iris and between it and the lens before opening the blades. The instrument is beautifully adapted for this purpose for when the blades are closed the shape is that of a spatula with a disc-like end and it is quite impossible to pass the paddle-like end of it anywhere else than behind the iris. When it is observed that the closed blades are quite behind the iris below they are allowed to spread and in so doing the blades separate and disappear behind the iris on either side. Thus the front convexity of the lens is engaged in the grasp and by simply closing the blades the anterior capsule is invariably seized near the lateral extremities of the lens on each side and secured in the bite of

the instrument when closed. It only remains now to gently withdraw the closed blades in a line exactly reversing the line of entrance, viz. upwards towards the incision. In doing this it is natural to take your time and steadily tear off the anterior capsule, slowly stripping it from the cortex and removing it in the grasp of the forceps. It appears as a transparent thread held in the teeth of the forceps and should be floated in water placed on a slide stained with eosin and fixed under a cover glass for demonstration and study. Removal of the anterior capsule from the eye in the case of immature, mature or hypermature cataract by the method above described is a distinct advantage over leaving it within the eye as is the customary practice.

After the capsule has been stripped off the front of the lens it next remains to express the nucleus and cortex by using the lens hook of Smith the bulbous end of which is applied to the lower part of the cornea (not the elbow or shank this time) when it will be found the lens will glide out with amazing ease.

In carrying out the technic of stripping off the



anterior capsule (all or in part) just described no change is made in the management of the upper eyelid by the assistant.

The operation goes on without hitch or halt, the only change being that the operator who stands always to the right of the patient's head in delivering *a la Smith* (either eye) must, when using the capsule forceps, change his position to the patient's right side next to his right arm facing him as in the Vienna operation pulling down the lower lid with the forefinger of his left hand and holding the forceps like surgeons hold a scalpel, or like a pen if you prefer and see that the flatness of the closed blades are in the same plane as that of the front surface of the lens by simply measuring it on the outside of the cornea before entering the incision (see Fig. 2). No accident has occurred in over 250 such operations.

If the lens is dislocated by the stripping process all the better for by employing Smith's technic for delivery it is invariably easy to extract. No attempt is made to rid the eye of live cortex. If any is left it will swell, undergo absorption and leave a perfectly clean black pupil. In the case of immature cataract the posterior capsule usually clings to the cortex and comes away with it.

*The Toilet:* In case the lens has been removed in its capsule it only remains to use the spatula or Green's bent probe-repositor to replace the arms of the coloboma and to sweep the under side of scleral lip of the corneal wound to separate the cut apron of the iris stump that sticks to it after delivery of the lens, the patient being admonished to hold the eye very still (in the position he naturally assumes), the assistant keeping masterful control of the upper lid, eyebrow and lower lid in the meanwhile. Then the patient is instructed to close his eye and the assistant aids him in doing so while gently removing the lid retractor. *The eversion of the lower lid is not released till some moments have elapsed after the eye is closed.*

In case the anterior capsule has been stripped off with the forceps it is wise to employ the following technic before replacement of the iris. I have discovered in a large percentage of cases (at least 25 per cent.) that the remaining part of the capsule has been dislocated with the nucleus and cortex and hangs like a clear shred of tissue half out of the wound. It is a mistake for the operator to replace it within the eye by means of the spatula which can easily be done. The operator uses the London dressing forceps, a rather large instrument with rounded blunt tip and having serrations which perfectly approximate, for the purpose of grasping the bag of capsule left clinging in the wound and gently extracting it *in toto*. After this maneuver the iris is toileteted as described above and the eye closed in the same manner.

#### CONCLUSION

While the use of my anterior capsule forceps has rendered me valuable service I must confess

that I would much prefer to extract the cataract in its capsule for there is no result I have ever achieved in any case that surpasses in beauty a smooth intra-capsular extraction. Moreover the principle involved is sound for capsule left behind is functionless and should not be left within the eye.

*The object of this paper is to encourage those who undertake the operation for cataract to adopt Smith's method throughout in every case where the lens will show a disposition to be born without strain and to furnish a method to fall back on in case of imminent disaster; and also to teach that the best time to operate for cataract is before blindness and senility have set in. The rule I adopt is to operate when the patient can no longer read newspaper print with his best glasses in ordinary light.*

#### REFERENCES

- \*As I have elsewhere described in minutest detail the technic employed by Smith in dealing with all kinds of operative conditions by his method of removing cataract I did not dwell upon it in my paper, referring the reader to my following articles:
1. Instruments Used by Lieutenant Colonel Henry Smith, I. M. S., and Some Points in Technique in His Method of Radical Extraction of Cataract; Ohio State Med. Jour., Vol. 7, No. 1, (1911).
2. Smith's Cataract Operation; a Descriptive and Illustrated Article Written During a Visit to Smith's Clinic at Jullundur, Punjab, India; Lancet-Clinic, Vol. 105, Nos. 6 and 38, (1911).
3. Detailed Report on 358 Cataract Extractions Performed at Jullundur, Punjab, India, in October, 1909, at Colonel Henry Smith's Clinic, with Complete Statistical Tables; Knapp's Arch. Ophthalmol., Vol. 41, No. 1, (1912).
4. Chapter on Delivery of the Lens in the book on "Senile Cataract" edited by the Chicago Ophthalmological Society and published by Cleveland Press, 329 Plymouth Street, Chicago, Illinois, (1912).
5. A New Pair of Lid Retractors for the Cataract Operation; Ophthalmic Record, Vol. 24, p. 248, (1915).
6. Management of the Eyelids During the Cataract Operation; Lancet-Clinic, Vol. 115, p. 159, (1915).
7. A Discussion of Some Newer Principles in Dealing with Uncomplicated Cataract; Knapp's Arch. Ophthalmol., Vol. 45, p. 307, (1916).
8. A New Anterior Capsule Forceps; Ophthalmic Record, Vol. 25, p. 520, (1916).

#### DISCUSSION

DR. F. G. STEUBER, (Lima): The symposium to which we have listened has been one of more than ordinary interest. Without doubt the preliminary and also the after treatment of cataract are of much importance and have a great deal to do with good final results. I wish to speak in particular about the mental state in the after care of these patients, the condition spoken of as traumatic neuroses or psychoses due to shock. Aged people do not take kindly to radical changes of environment. This may be a factor in the development of senile delirium, since in our personal experience we have never encountered this complication in patients who were operated on in their own homes. The few cases in which we have seen senile delirium were hospital cases. Notwithstanding this fact, we cannot operate on all patients in their own homes.

A short time ago a patient, who had been operated on in the hospital, developed some slight delirium at the end of the second week, notable for this peculiarity. The patient would retire at 9 o'clock and arise half an hour later and could not be induced to return to bed for several nights in succession. The patient was sent to her own home in a neighboring town and this was the means of restoring her mental balance and she had no further trouble.

Hard and fast rules cannot always be applied in determining the choice of the one or two stage operation. A patient who has but one eye for an operation or perchance some complication should be given the benefits of a preliminary iridectomy.

## OHIO PUBLIC HEALTH NOTES

Organization of one of the largest county health departments in the state was completed recently in Franklin County with a staff of two physicians, a nurse and a secretary. Dr. C. M. Valentine is head of the board; Dr. W. M. Taylor, sanitary health officer, and Miss Louise Druggan, nurse. Headquarters have been established in Columbus and an extensive program mapped out. Miss Druggan was formerly a nurse in the Columbus schools and will devote much of her time in county school work.

—Health Officer William H. Peters of Cincinnati, has requested patrons of soft drink places to aid the health department in the enforcement of state regulations to promote sanitation. The regulations provide for single service cups, or adequate facilities for sterilizing glassware utensils and cups. With present prices prevailing, Dr. Peters declares the public is entitled to maximum protection.

—A total of 1906 children under school age were registered at Akron's baby clinics during June. Miss Elizabeth Yost, director of the nursing division of the local health department, is in charge of the work being done in the clinics, where school nurses are now on duty.

—Dr. John R. McDowell has resigned as director of the Division of Hygiene, State Department of Health, and is now director of the health service of the Lake Division, American Red Cross, with headquarters in Cleveland.

—Thirty-five thousand pupils in Cleveland's schools, one-third of the total number enrolled, are physically defective, according to Dr. R. P. Emerson, professor of children's diseases in Tufts Medical School, Boston, who is directing the health and hospital survey in the Forest City. Improper feeding, over-fatigue and lack of home control are among the factors which contribute to the physical unfitness of the pupils. Under the auspices of the Cleveland board of education, Dr. Emerson is conducting a series of lectures on the correction of malnutrition in children, which are being attended by a class of 200 physicians, nurses and dietitians.

—Following a survey of Columbus school children by United States Public Health surgeons and the State Department of Health, 34 children from public and parochial schools of the city, and a number from Lancaster, Circleville, Ashville, Galion and Massillon, were operated for trachoma.

—A resolution has been adopted by the Canton board of health making it unlawful for any person, firm or corporation to provide or fur-

nish for the use of its employes, common towels or drinking cups. The ruling also makes it illegal for the common towel or drinking cup to be used by passengers traveling to various parts of the city, in any school, church, hospital, workshop, factory, hotel, restaurant, store, theater, telephone exchange or in any office or public building.

### Ohio Plans Survey of Industrial Cripples

The Industrial Commission of Ohio has made application to the federal government for its share of the appropriation made by the Fess Bill to create commissions to make a survey of physically handicapped persons. They will amount to approximately \$20,000 for the balance of the present year, or \$10,000 a quarter, while beginning January 1, 1921, the sum will be increased to \$12,500 a quarter or \$50,000 annually. The bill provides that each state receiving the government aid shall appropriate a like amount with which to carry on the work. But a special clause provides that where the legislature is not in session at the time the bill becomes effective, application may be made, and government aid will be extended until 60 days after the legislature meets. If at the end of the 60 days the state legislature fails to make an appropriation government support will be withdrawn.

The federal bill, which carries the appropriation, provides for a commission of three members to be appointed by the governor of each state, the same to be approved by the federal department of public health. The duty of this commission will be to make an immediate survey of the men and women of the state who are physically handicapped, and after this has been made, provide them with suitable training that they may become self-supporting.

The first allotment will be for \$10,000 for the quarter beginning July 1, and just as soon as this is received, Governor Cox will be asked to appoint the three members of the commission. The commission will work in a limited way until the legislature meets next year, when it will be asked to appropriate \$50,000 to carry on the work. If this amount is granted, the government will give an equal amount, making \$100,000 annually available.

As far as is known Ohio is the first state to make application for any part of the government appropriation and will be the first to undertake an extensive survey of its industrial cripples. The survey, as contemplated will be very similar to a survey of crippled children which is being initiated by the Ohio State Medical Association in co-operation with the Ohio Institute of Public Efficiency, the State Department of Health, the Board of State Charities, the State Department of Public Instruction and the Ohio Society for Cripples which has been organized by Ohio Rotary Clubs.



## Status of Physicians Under the Prohibition Act Is Clarified by New Regulations

After several months of operation under the national prohibition act the provisions relative to purchase, prescription, manufacture, etc., of intoxicating liquor are becoming clarified.

Unfortunately for a number of months a misapprehension existed, based on a misinterpretation of the law to the effect that bond would be required from physicians before permission was granted to prescribe liquors. The new regulations clearly set forth the fact that no bonds are required from physicians in return for the privilege of securing, prescribing or administering intoxicants defined under the national law.

Physicians, however, must procure a permit before purchasing or prescribing liquors in their practice.

As the regulations issued by the government become more definite and as it becomes more clearly indicated that no stigma of any kind attaches to the physician who secures formal permission to prescribe or administer intoxicants, a greater number are taking advantage of this privilege. At this time approximately one-fourth of the physicians of Ohio, numbering about 1800, hold such permits.

Heretofore physicians were often solicited by representatives of liquor houses to make purchases before the issuance of a permit. In a recent ruling by the Department of Internal Revenue it is held that the personal solicitation of orders for the purchase of intoxicating liquor other than ethyl alcohol or sacramental wines by any person, regardless of whether he holds a permit authorizing the sale of intoxicating liquor, shall be considered as "advertising" within the meaning of the national prohibition act.

Hereafter no permit to purchase intoxicants will be issued unless the name of the vendor appears on the application for permit (form 1410) and that no permits to prescribe whiskey, brandy, rum or gin shall hereafter be approved in advance.

Physicians may secure without bond any quantity of distilled spirits necessary for the manufacture of medicines. Not more than six quarts, however, must be used by any one physician during a calendar year, for administering to their patients in cases of emergency, sudden shock, etc., where delay in waiting for a prescription might result in loss of life or serious suffering.

The securing of a permit to purchase intoxicants must be done by filing form 1404 in triplicate. On this form (which can be secured from the federal prohibition director of Ohio, J. A. Shearer, 36 West Gay St., Columbus,) should be stated the exact "acts" to be authorized, i.e., "the use of such and such an exact quantity of intoxicating liquor, first for compounding medicines; second, for sterilizing instruments and

cauterizing wounds, and third, administering to patients." On this form of application to purchase must be shown the proper quantity of several kinds of distilled spirits or wines necessary to cover the needs of the physician during a calendar year.

After the permit to purchase is received, approved by the prohibition director, a withdrawal from storage or purchase from a wholesale or retail dealer is accomplished by the filing with the director of form 1410 in triplicate, which among other information must contain the name and address of the firm or individual from whom such intoxicants are to be procured. If the purchase is to be made locally, form 1410 must be filed in triplicate with the prohibition director. However, when a physician is purchasing from a city some distance from his address and where transportation is involved, it will be necessary for the physician to execute four copies of form 1410, sending all four to the prohibition director for approval. These forms are then sent to the vendor named therein, by the director. Such vendor is to file one copy, send one copy to the prohibition director, send two copies to the physician (vendee) who must surrender one of the copies to the transporting company by whom he must be known, before delivery will be made.

In none of these transactions is bond necessary on the part of the physician, and whereas under the narcotic law the words "prescribing, administering and dispensing," were considered synonymous, under the federal prohibition law there is a line or demarcation. The regulations for "administering" were briefly set forth above. For "prescribing" there is a special form with which the physician must be provided.

All prescriptions for intoxicating liquor must be made upon this form, known as form 1403, and must contain all the data called for by such form, except that in any case where a physician holding a permit to prescribe liquor is not in possession of such form due to any reason justifying such condition, and delay in procuring the same might result in loss of life, aggravation of an illness or intense suffering, he may prescribe intoxicating liquor upon a form other than 1403, provided, however, that such form of prescription must contain all the information called for on form 1403. No prescription shall be used more than once. The prescription blanks (form 1403) are issued in book form, serially numbered, and may be procured from the prohibition director, free of cost by any physician holding a permit to so prescribe. Not more than one book containing 100 blanks may be issued at one time to the same physician.

Emphasis is placed by the prohibition director on the fact that no physician must attempt to



The good looking gentlemen lined up for inspection above are the new Councilors of the Association who were elected by the House of Delegates at the Toledo annual meeting. From left to right they are—Sylvester Jacob Goodman of Columbus, Ralph Reid Hendershott of Tiffin, and William Aaron Ewing of Dayton. Dr. Goodman succeeds Dr. Wells Teachnor, president-elect of the Association, as Councilor of the Tenth District, secretary of Council and chairman of the Auditing and Appropriations Committee. Dr. Hendershott, after serving the unexpired term of Dr. E. S. Protzman of Kenton, who resigned as Councilor of the Third District in January, was formally elected to that office at the Toledo meeting, and Dr. Ewing was chosen to succeed Dr. John E. Hunter, who resigned as Councilor of the Second District. Drs. Goodman and Ewing are classmates, both being graduates of Jefferson Medical College of Philadelphia in the year 1900, while Dr. Hendershott was graduated from Starling Medical College, Columbus, in 1898.

prescribe without first securing permit on form 1405, and have had issued to him forms 1403, unless in case of extreme emergency. In such instances prescription must be made in triplicate and a copy immediately forwarded to the prohibition director, with a letter giving fully all reasons for so prescribing.

The federal prohibition director for Ohio, Mr. Shearer, has indicated that while his office will strictly impose the regulations, that it is not his intention to hinder or embarrass physicians in legitimate practice of their profession, and that he will do all in his power to minimize delay in following out the formal routine relative to permits, etc. He has, however, indicated that the Glycyrrhizae Aromaticum highball is doomed and the Levendulae Composita cocktail is banned, as well as no less than twenty concoctions easy of access at any drug store. The federal prohibition department has ruled that drug stores selling such tinctures, elixirs and compounds must take out the regulation permit to handle intoxicants and that purchasers must be armed with physicians' prescriptions in order to secure them. These drugs as enumerated by the department are:

Cordiale Rubi Fructus (Blackberry Cordial.)  
Elixir Aromaticum (Elixir Aromatic.)

Elixir Anisi (Elixir of Anise.)

Elixir Aromaticum Rubrum (Red Aromatic Elixir.)

Elixir Aurantii Amari (Elixir of Bitter Orange.)

Elixir Cardamoni Compositum (Compound Elixir of Dardamon.)

Elixir Glycyrrhizae (Elixir of Licorice.)

Elixir Glycyrrhizae Aromaticum (Aromatic Elixir of Glycyrrhiza.)

Elixir Taraxaci Compositum (Compound Elixir Taraxacum.)

Spirits Juniperi Compositus (Compound Spirits of Juniper.)

Spiritus Myrciae Compositus (Compound Spirits of Myrcia.)

Tinctura Amara (Bitter Tincture.)

Tinctura Aromatica (Aromatic Tincture.)

Tincture Caramelis (Tincture Caramel.)

Tincture Cardamoni Composita (Tincture Cardamon Compound.)

Tincture Levendulae Composita (Compound Tincture of Lavender.)

Vinum Aurantii Compositum (Compound Wine of Orange.)

Vinum Pruni Virginianae (Wine of Wild Cherry.)



# Health Insurance Is Impracticable from Viewpoints of the Three Groups Vitally Concerned

Otto P. Geier, M. D., Cincinnati

Any state-wide sickness insurance plan, to be worth the powder to blow it up, must have the unqualified interest and assistance of every forward thinking physician in the State. To be anything more than the old outdoor poor relief system, formerly administered by the overseers in a new guise, the structure must be the most highly developed system of post-graduate medical teaching, along with the most extensive effort at preventive medicine ever known. Periodic physical examination, medical supervision, dental and nursing service, with all the facilities afforded by group diagnosis—clinical and laboratory equipment, and lastly adequate compensation to the doctor must be afforded so that the plan may attract the best minds in the profession rather than the failures. Above and beyond all this, time must be given in which to educate a sufficiently large group of physicians to the social point of view and to perfect an organization to intelligently administer the whole. In brief, we should approach the subject of sickness insurance, if at all, by evolutionary stages, not revolutionary ones. We should begin to build that structure by setting up all the above mentioned medical machinery first and then having raised the quality of medical service obtainable by all, add the compensation features. Thus we will avoid England's failure to spend one pound of moneys actually set aside for medical research and prevention.

## INVESTING IN SICKNESS PREVENTION

If we believe for a moment that our legislature would seriously consider the imposition of an expenditure of \$50,000,000 to \$80,000,000 a year on a scheme of sickness compensation that is still in the tadpole stage of development, it is not inconceivable that our forward-looking Commonwealth might be persuaded, as a safe beginning, to invest five to ten millions a year in a great constructive program for sickness prevention. There can be no argument as to health values that would ensue from such an investment of the people's funds. The state might meanwhile show its first ray of economic intelligence on this subject by preventing the sale of patent medicines, on which our people waste about \$8,000,000 a year—just enough to pay for the real experiment in disease prevention. The second intelligent step would put the advertising quack and dentist out of business. The saving of these millions to the poor affected by these two steps, plus the saving of some \$75,000,000 expenditure to the people on account of prohibition, should still further remove the health improvement problem from confusion with the questions of adequate wage and poverty, and would eventu-

ate in a rather small fringe of people being left in the charity class because of illness. Such a program of health assurance would be democratic because it would be applied to 100% of the population—the rich and the poor alike.

I believe I am one of those fairly conscientious in the matter of common weal. I have given my full share of attention to the attempted solutions of community problems of disease, crime, delinquency and dependency, but I am not willing to be classed with those who believe that American society is going to the bow-wows and that only one thing, and that is compulsory sickness insurance, will save it. I do believe that some *compulsory health conservation movement* is timely and proper and that the medical profession should strive untiringly for its introduction.

From time immemorial the medical profession has been bearing more than its share of the communities' burdens. I don't believe it should be called upon to give up its freedom of action, its ethical position, its dignity, its opportunity for still greater contributions to human welfare unless the profession itself feels confident that such further sacrifice is worth while. I do know that under the present system few people need go without medical service whether paid for or not. I agree that this service is not always adequate but I utterly fail to see how the proposed plan will assure adequacy of service quantitatively or qualitatively. I am equally certain that many do not seek medical attention early and when they most need it, but experience does not suggest that they would seek it earlier and more frequently under the so-called model bill.

I do recognize that low wage and poverty are burning questions of this day and must be reckoned with, but they should not be hopelessly confounded at this stage with a problem sufficiently large unto itself—the conservation of health. There is no question but that poverty due to illness can be largely reduced by preventing illness and I repeat that some system of health compulsion should be inaugurated at once.

If compulsory sickness insurance is ever to justify itself sufficiently to be enacted into legislation, its proponents should be able to assure us that such legislation will favorably affect the body politic and that the creation of the tremendous organization necessary for the proper conduct of the sickness insurance scheme would not make any more difficult the truly democratic administration of our public affairs. This new bureaucracy must not be allowed to upset our opportunities under a real democracy.

## THE EMPLOYEE

But to return to the consideration of the three

groups most vitally affected. The health and well-being of the worker should be the paramount consideration in any proposed legislation. We want to be sure that the sickness insurance scheme is not in fact a poverty insurance program or a cloak for charity in a new form. We must be careful that the proposed program assures independence of action and thought in the worker through intensive education rather than dependence. Any proper plan should guarantee to the worker an opportunity for the full enjoyment of health, productivity and the greater earning capacity that goes with it. We do not want alms-giving from the state after disease and invalidity have resulted from personal neglect of common sense health rules on the part of the individual. We do not want charity in a new form because of the failure on the part of the state to afford the maximum protection against disease. All of the above are fundamental considerations for the worker, whether he contributes a part or nothing to the fund making any such scheme possible.

#### THE EMPLOYER

We need not give much time to the consideration of the way the employer would be affected by compulsory sickness insurance, except to realize that unless the plan is economically sound and really secures to the workmen proper health returns for the money invested in the health scheme, the plan must eventually become topheavy financially and a real burden upon the employing class, necessarily to the disadvantage of the workmen as well. The interests of these two groups are inter-dependent. You cannot ruin the one without unfavorably affecting the other. On the other hand, if a scheme can be evolved that in dollars and cents values will add to the productivity, happiness and contentment of the worker, it will make perhaps little difference in the end whether the employer pays the full cost or divides the expense with the employed class. No such economic values as suggested could possibly exist in any insurance scheme unless the prevention of disease is its main purpose and the payment of sickness benefits against the irreducible minimum of disease merely the later accompaniment of the project.

#### THE PHYSICIAN

Now as to the third group. How is the character and prosperity of the medical profession to be affected by the plan? This is perhaps the most serious question raised, for it is easily apparent that unless the proposed legislation, in taking away private initiative and reward, in destroying the competitive system under which enormous scientific advance has been made, does not substitute measures which will constantly add to the supply of high-standard practitioners of medicine—research workers and public health men, this state will suffer a marked increase in

morbidity and mortality to its everlasting shame.

The oft-made statement that compulsory sickness insurance will automatically reduce disease because of the high expense of sickness compensation, just as the workmen's compensation insurance has supposedly reduced accidents because of their high costs, could easily be challenged had we but the time, but the assertion supports my doubt that quality of medical service would be conserved under compulsory sickness insurance.

I wonder, for instance, whether anyone is bold enough to suggest that surgery has been improved by the existence of workmen's compensation insurance? Is it not a fact that the average injured worker is now being attended by medical men rather than by surgeons? Did not the private insurance company formerly more carefully select surgeons to attend the industrial injured? Does the fact, that in our present state of political wisdom we pay the chief surgeon of the Industrial Commission the munificent sum of \$3,500 to supervise an annual expenditure of approximately three millions for surgical care, suggest that we are likely to get very intelligent administration of the fifty millions or more that will be expended annually for medical care? Furthermore, we must remember that it would be relatively easy, if our statesmen had but the idea and desire, to set up a piece of machinery that would control the quality of surgical service rendered the injured workmen. Compare this to the difficult task of so organizing our sickness insurance that we might know even a fraction about the character of medical service rendered in behalf of the sick. It is somewhat absurd to the student of political affairs to be told that intelligent discrimination might issue from the politically governed bodies under this new state scheme.

#### INDUSTRIAL COMMISSION PROBLEMS

I hope that these statements may not be construed as an unfriendly criticism of the Industrial Commission or the system of the Workmen's Compensation Act, for the latter is one of the great forward steps in Ohio's legislative program. These criticisms merely instance the limitations for intelligent business-like action that the Industrial Commission faces. But it is these very legal limitations, hedging about any legislative act, which assume at the outset that every man to be connected with the administration of the new program will not be trustworthy in his management, that defeat the best laid plans. These one hundred and one limitations of salaries, personnel, etc., destroy all the initiative, creative energy, and imagination that make private undertakings, with none of these hardships, a success.

#### THIRTY PER CENT. EFFICIENCY

I mention these apparently trivial things in this august discussion merely to prove that self-government is still in its baby stage and that we



are only about 30 per cent. efficient in any of our municipal or state undertakings. We haven't yet learned how to effectively conduct public business, and until we do we had better not still further strain our political system.

It is relatively simple to befuddle the public mind by the kaleidoscopic machinery that promises to relieve sickness and want, but in political practice it is difficult to make the various wheels within the wheels properly cog in order to drive forward the good old state.

The day that the Industrial Commission, with its perhaps eight hundred employes, graduates out of the Sophomore Class may also mark the day when it will be politically and economically safe to consider loading the state machinery with the eight thousand or eighty thousand (who knows how many?) statesmen necessary to carry out the functions of compulsory sickness insurance. In the meantime, let us get seriously and actively at work saving our citizenship from the needless suffering and want directly preventable by an adequate system of health protection.

#### PRESENT POSSIBILITIES

What are some of the minimum requirements in the way of public health machinery (Federal, State, County), that we should seek with unbounded zeal?

1. Public and private organizations of group diagnosis so that high grade medical and surgical assistance will be available to all of the professions and either free to the patient or at a graduated cost.

2. Hospital and clinical diagnostic facilities to all who qualify professionally.

3. Dental, X-ray and diagnostic laboratory facilities and service at graduated cost.

4. Highly developed and easily accessible post-graduate instruction.

5. Opportunities for research work in publicly supported laboratories.

6. Opportunities for economic and social research into medical organization.

7. Public support if necessary of medical colleges.

8. Opportunities for the training of Doctors of Public Health and Industrial Medicine.

9. Increased hospital facilities.

These nine factors will together produce a higher type of physicians than we possess on the average today not only for diagnostic and curative work, but especially for an active health prevention program.

The main avenues of attack upon disease by the Public Health Departments would be through (1) School Health Centres (2) Industrial Health Centres.

(1) SCHOOL HEALTH CENTRES.

(a) Establishment of a health centre in each school, high school and college.

(b) Complete health supervision of the pupils, including of course, careful periodic physi-

cal examinations continued until pupil enters industrial or commercial life.

(c) Supervision of the pre-school age child. Linked up with this health centre will be the natal and pre-natal supervision of that district.

(d) Health education and physical training.

(e) Adequate dental and nursing service.

(2) INDUSTRIAL HEALTH CENTRES.

(a) Installation of medical and dental dispensaries with adequate nursing personnel in large factories or by localities for smaller factories.

(b) Establishment of medical supervision of those employed in large units, with periodical physical examination.

(c) Minimum standards of sanitation of workshops and buildings.

(d) Provision against occupational fatigue and health hazards.

(e) Application of minimum standards of safety.

(f) Health education and stimulation of recreation.

These two broad sub-divisions of public health work, would be supplemented by vigorous supervision of the housing and living conditions of the people and guarantee to them safe water, milk and food supplies with adequate sewage and waste disposal. Along with this sanitary program would come a more complete control of contagious diseases as well as an extension of hospital and quarantine facilities.

This plan would leave the choice and payment of the physicians in the hands of the individual treated, as now, but there would be a definite check against the exploitation of the unfortunate by the unprincipled and ignorant members of the profession. It would provide each one with knowledge of his own physical condition and would enforce measures of self-health improvement so as to safeguard the lives of others.

To those members of our profession unacquainted with the trend of social events these minimum requirements may seem revolutionary but let me plead for their serious discussion lest we have foisted upon us legislation not of our own making and destructive perhaps of the best that is in us. Let us take warning of the experience of our British confreres who blindly opposed this system without offering an intelligent substitute to satisfy the popular demand that the old individualistic medical system be abandoned with the hope of improving the conditions of the masses. Let us not be thus caught unawares.

Let our slogans be:

*One visit in time will save nine.*

*A periodic physical will prevent the phthisical.*

In the new social order it is to be hoped that the medical profession will not be found wanting, but will take its proper place and assume leadership in action looking toward the better day. To qualify, however, in these world movements, the profession must first take an inventory of itself

and see whether its time-honored relationships measure up to the changed social condition, whether its organization, its methods of practice, its teachings, have kept pace with the new and greater needs for public health supervision, and the industrial development of the communities.

Is the profession as a whole actually coping adequately with disease and its attendant poverty, or are its old concepts breaking down before the task? If the latter is true, what social remedies has it to propose?

Conference and intelligent discussion of the future of medicine, a method of securing adequate medical service and health supervision for 100 per cent of the population is imperative. Every physician must become less of an in-

dividual and think more in terms of the mass and its problems as they relate themselves to medicine.

The profession must realize that the mobilization of man power for industrial and commercial life actually lies within itself; that we have had relatively too much science and research with too little organized application of our science to the great mass of the people upon whose health and productivity finally depends the wealth of the nation. We must learn to analyze carefully the modern preventive and curative needs of the community, and then fit our medical organization to these several functions, to the end that each medical man's minimum effort will produce the maximum desired result for improved health.

## Health Association Proceeds with Organization of Local Health Leagues

The Ohio Public Health Association, launched recently with the approval and full co-operation of the State Department of Health, the City Health Commissioner's Association, and the General District Health Commissioner's Association, and which has since been endorsed by the Ohio State Medical Association and the Ohio Hospital

Association, has issued a handbook setting forth the purpose of the association to be used in organizing county and city public health leagues.

The Ohio State Medical Association will be represented on the board of trustees of the new state health association by Dr. C. W. Waggoner, Toledo, and Dr. F. E. Bunts, Cleveland. The hospital association has designated P. W. Behrens, Toledo, and Frank E. Chapman, Cleveland, to represent it on the board of the Ohio Public Health Association.

The new association is now proceeding with the organization of local public health leagues using the local societies for the prevention of tuberculosis and similar organizations as a nucleus. It is also preparing to conduct the annual sale of Christmas seals in December.

In a foreword to its organization handbook the association sets forth the reasons for extending the scope of the state organization and the necessity for organizing local public health leagues as follows:

### FOREWORD

Ohio has the necessary legal machinery for establishing modern health administration in every county and city in the state. Passage of the Hughes law and the Griswold amendments which became effective January 1, 1920, makes this possible. This law is not self-executing. No official or organization is charged with the duty of making this machinery work.

It is entirely up to the citizens of each local

community—county or city—whether they will take advantage of the opportunities offered them to provide that degree of health protection which all authorities agree can come only through the employment of trained health officers and public health nurses. The Griswold amendments make this optional. Otherwise the State Department of Health would have been in a position to take the initiative and to require an efficient organization in each local community.

Whether optional or mandatory, no system of health administration can be made effective unless it is backed by public sentiment. That sentiment must be guided and crystalized by proper organization and education. Progress that has been made in Ohio in the past ten years in the establishment of sanatoria, open air schools and nursing service, for the care and treatment of persons suffering from tuberculosis would not have been possible without the untiring efforts of the Ohio Society for the Prevention of Tuberculosis and its 76 local agencies, in co-operation with voluntary organizations interested in the cause of better health. It is the function of the private agency to initiate and demonstrate methods and means for meeting the various public health problems and then pass them over to the official organization for adoption. It is generally agreed that taxation is the best and fairest way of paying for health protection. This has been the policy of the Ohio Society in the past, in promoting the tuberculosis work.

To meet the need of such an organization in a broader way, the Ohio Public Health Association was formed at the annual meeting of the Ohio Society for the Prevention of Tuberculosis in Columbus May 13, 1920. The Ohio Society without relaxing in the slightest the original purposes implied by its name, forms the nucleus for the new organization. It is not a departure from present policy, but rather the recognition of a fact, that it has been doing general public health work in its war against the white plague.





## New Ohio Sanitary Code Revises Regulations Governing Control of Communicable Diseases

The Ohio Sanitary Code—a complete revision of the regulations of the State Department of Health, adopted by the Public Health Council and having the force of law—is now in effect. Several important changes are made in the regulations—notably, from the physician's standpoint in regard to communicable disease control, venereal diseases and maternity hospitals.

The new communicable disease regulations embodying principles laid down by the American Public Health Association's committee on communicable disease control, do away with terminal gaseous disinfection for all diseases except smallpox, substituting therefor concurrent disinfection of the patient's discharges, linen, etc., and establish more scientific methods of control of exposures. Detailed instructions for the handling of all important communicable diseases are given in the extract from the new sanitary code printed below.

Responsibility for case reporting is placed upon druggists as well as physicians by the amended venereal disease regulations. Druggists must keep a record of all persons seeking to purchase venereal disease remedies and must report such persons to the district health commissioner. The matter of quarantining venereal disease patients where such course is deemed necessary for protection of the public health is now left to the discretion of the district health commissioner, instead of the state commissioner of health, as formerly.

Entirely new regulations for the government of maternity hospitals, adopted in accordance with new arrangements for the supervision of such institutions by the bureau of hospitals of the State Department of Health, are incorporated in the code.

The sections governing morbidity reports show no material change from the amended regulations which became effective last March. Changes at that time reclassified the list of reportable diseases, dropped a number of them and added several which had not been reportable before. The complete list of reportable diseases now includes:

Class A.—Chickenpox, diphtheria, influenza, malaria, measles, German measles, epidemic meningitis, mumps, paratyphoid fever, pneumonia, poliomyelitis, scarlet fever, smallpox, tuberculosis (all forms), typhoid fever, whooping cough.

Class B.—Chancroid, gonorrhea, syphilis.

Class C.—Erysipelas, diarrhea and enteritis under two years of age, puerperal septicemia.

Class D.—Ophthalmia neonatorum, any inflammation of the eyes of the newborn, trachoma.

Class E.—Anthrax, Asiatic cholera, dysentery,

leprosy, plague, rabies in man, septic sore throat, tetanus, typhus fever, yellow fever.

Class F.—Any disease, disability or ailment contracted as a result of the nature of the person's employment, including a list of specified diseases, disabilities or ailments and not excluding others.

Other sections of the code, in addition to those mentioned, deal with inflammation of the eyes of the newborn, physical examination of school children, tuberculosis hospitals, soda fountains, submission and approval of plans and sanitary control of state parks (Buckeye Lake, Indian Lake, Lake St. Mary's, Portage Lakes and Lake Loramie.)

### Regulations for the Control of Communicable Diseases

(Extract from the Ohio Sanitary Code)

**REGULATION 11. (DEFINITIONS).** *Contact.* A "contact" or an "exposed person" is any person known to have been sufficiently near to an infected person to have been exposed to the transfer of infectious material directly, or exposed to articles freshly soiled with such infectious material directly, or exposed to articles freshly soiled with such infectious material.

*Disinfection.* This term signifies the destruction of disease-producing organisms by chemical agents, liquid or gaseous, or their destruction by cleansing or other physical agents.

*Concurrent disinfection* is the application of disinfection immediately after the discharge of infectious material from the body of an infected person, or the immediate application of disinfection to articles soiled with such infectious material.

*Terminal disinfection* indicates the process of rendering the personal clothing and the immediate physical environment (the room or the house as the case may be) of the patient free from the possibility of conveying the infection to others when the patient has died or recovered and is no longer a source of infection.

*Cleansing.* This term signifies the removal, by scrubbing or other mechanical means, of organic material on which and in which disease-producing organisms find favorable conditions for prolonging life and virulence; also the removal by the same means of bacteria adherent to surfaces.

*Quarantine.* This term signifies that procedure affecting both the patient and his environment which is intended to prevent the spread of infection to others. Quarantine includes: (1) Isolation of the patient; (2) contact-control; (3) impounding of infected material.

*Isolation.* This term signifies the isolation from susceptible persons of actual cases of communicable disease, or known carriers of infect-

ing organisms, in such places and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to such susceptible persons.

*Contact-control.* By contact-control is meant such restraint of exposed persons as will prevent such persons from infecting others should they develop the disease to which they have been exposed.

*Impounding of infected material.* This term signifies the control of possibly infected inanimate material in the immediate environment of the patient until it shall have been disinfected.

*Susceptible person.* This term signifies a person who is not known to have become immune to the disease to which he has been exposed, by reason of age, a previous attack, or other natural or artificial process.

*Immune person.* This term signifies a person who is known to have become immune to the disease to which he has been exposed, by reason of age, a previous attack, or other natural or artificial process.

*Vaccination.* Vaccination for the prevention of smallpox signifies an inoculation by incision, puncture, scarification or injection beneath the epidermis of a vaccine which produces with some constitutional disturbance, the typical vaccine vesicle, and which leaves, after the pock has healed, a characteristic scar.

**REGULATION 12. (QUARANTINE).** Immediately upon the receipt of a report of a case of smallpox, diphtheria, membranous croup, scarlet fever, measles, whooping cough, chickenpox, epidemic meningitis, acute poliomyelitis, or any other disease required by law or by the state department of health to be quarantined, the health commissioner shall quarantine the house or place where the patient is found and shall place thereon a placard having printed on it in letters not less than two inches high the name of the disease therein. The health commissioner shall at the time the house is placarded explain the quarantine regulations and leave with the head of the family or with the person having charge of the patient printed instructions for preventing the spread of the disease. No quarantine placard shall be removed except by direction of the health commissioner.

**REGULATION 13. (INVESTIGATION OF REPORTED CASE.)** Immediately upon receipt of a report of any disease in which restrictive or preventive measures are required by the district board of health or the state department of health, the health commissioner shall make an investigation to determine the source of infection, the number of exposures, and to secure such other information as may be necessary to prevent the spread of the disease. The reports of such investigations shall be kept on file in the office of the health commissioner.

**REGULATION 14. (INVESTIGATION OF UNREPORTED CASES.)** Upon receipt of in-

formation that a quarantinable disease exists in any house or place within the district, when such case has not been reported by a physician, the health commissioner or some physician appointed by him shall immediately investigate the case for the purpose of making a diagnosis. If such investigation reveals the presence of a quarantinable disease the health commissioner shall immediately institute the proper quarantine.

**REGULATION 15. (RECIPROCAL NOTIFICATION.)** When any person with a communicable disease, or any susceptible person exposed to a communicable disease, removes from one health district to another, it shall be the duty of the health commissioner of such health district to notify the health commissioner of the district to which the patient or exposure has removed, of the name and address of such person, and the disease from which he suffers or to which he has been exposed. It shall also be the duty of the health commissioner of the district from which such patient or exposure has removed to notify the state commissioner of health.

**REGULATION 16. (DURATION OF QUARANTINE AND PREVENTIVE MEASURES.)** The quarantine provided for in the preceding regulations shall be applied as follows:

#### CHICKENPOX

*For the patient:* Isolation until recovery and the disappearance of all signs of the disease.

*For exposed persons:* Quarantine of susceptible children on the premises with the patient. Provided, that when the date of first exposure is accurately known or can be definitely determined, susceptible children shall be quarantined only from the twelfth to the twenty-first day from such exposure.

*Disinfection:* Concurrent disinfection of articles soiled by discharge from lesions.

#### DIPHTHERIA (INCLUDING MEMBRANOUS CROUP)

*For the patient:* Isolation until recovery is complete as determined by bacteriological examinations of secretions from the throat and nose. No patient shall be released until such cultures are negative on two consecutive occasions not less than forty-eight hours apart.

It shall be the duty of the health commissioner or some person appointed by the health commissioner to take the final release culture.

All cultures taken for the purpose of diagnosis or release under this regulation shall be examined in a laboratory approved by the state commissioner of health.

*For exposed persons:* (1) *Residing in the house or place with the patient.* Quarantine of adults and children until bacteriological examination of secretions from the throat and nose is negative on one occasion. Such persons may be released after such negative examination, providing they do not return to the quarantined house. Except, that where the isolation of the patient is satisfactory in the opinion of the



health commissioner, adult wage earners whose work does not bring them in contact with children or with the food supply may be permitted to enter and leave the quarantined premises under such restrictions as the health commissioner may impose. Children, and adults who remain in the house with the patient, shall have cultures taken from the throat and nose when the first negative report on the patient is received, and shall be released when such cultures do not show the presence of diphtheria bacilli and the quarantine is lifted. (2) *Residing apart from the patient.* Exposed persons shall be quarantined until a bacteriological examination of secretions from the nose and throat is negative for the diphtheria bacillus.

*For carriers:* Persons who have been found by bacteriological examination to have diphtheria bacilli in the nose and throat shall be isolated and released in the same manner as is provided for clinical cases of diphtheria.

*Disinfection:* Concurrent disinfection of all articles which have come in contact with the patient and of all articles soiled by discharges from the patient.

Thorough cleansing of the sick room when the patient is released.

#### MEASLES

*For the patient:* Isolation until recovery is complete providing such isolation shall not cease before seven days from the onset of the disease.

*For exposed persons:* (1) *Residing in the house with the patient.* Adults, and children who have had measles shall not be quarantined. Susceptible children shall remain in the house until the patient has been released and for an additional period of fourteen days. (2) *Residing apart from the patient.* Susceptible children shall be quarantined for fourteen days from the date of last exposure to the disease. Provided, that when the date of first exposure is accurately known or can be definitely determined, susceptible children shall be quarantined only from the seventh to the fourteenth day from such exposure.

*Disinfection:* Concurrent disinfection of all articles soiled with the discharge from the nose and throat.

Thorough cleansing of the sickroom when the patient is released.

#### MENINGITIS, EPIDEMIC

*For the patient:* Isolation of the patient until all signs of the disease have disappeared and cultures from the naso-pharynx are negative for the meningococcus. Isolation for a period of twenty-one days may be accepted in lieu of bacteriological measures of release.

*For exposed persons:* (1) *Residing in the house or place with the patient.* Quarantine of such persons as come in contact with the patient or his discharges until disinfection and for an

additional period of ten days. Such quarantine shall not include wage earners whose work does not bring them in contact with children or with the food supply. (2) *Residing apart from the patient.* Quarantine of children under sixteen years of age for a period of ten days from the date of last exposure.

*Carriers:* Quarantine of carriers detected by bacteriological methods until the naso-pharynx is free from meningococci.

*Disinfection:* Concurrent disinfection of discharges from the nose and throat and of the articles soiled therewith.

Thorough cleansing of the sickroom when the patient is released.

#### POLIOMYELITIS, ACUTE

*For the patient:* Isolation until recovery from the acute manifestations of the disease, but no case shall be released until twenty-one days from the first occurrence of the disease.

*For exposed persons:* (1) *Residing in the house or place with the patient.* Quarantine of such adults and children as come in contact with the patient or his discharge until disinfection and for an additional period of fourteen days. Such quarantine shall not include wage earners whose work does not bring them in contact with children or with the food supply. (2) *Residing apart from the patient.* Quarantine of children under sixteen years of age for fourteen days from last exposure to the disease.

*Disinfection:* Concurrent disinfection of nose, throat, and bowel discharges and of all articles soiled therewith.

Thorough cleansing of sick room and premises when the patient is released.

#### SCARLET FEVER

*For the patient:* Isolation until recovery is complete and until all abnormal conditions of the nose, throat and ear have disappeared, but in no case shall the patient be released until thirty days from the first occurrence of the disease.

*For exposed persons:* (1) *Residing in the house or place with the patient.* Exposed children who are immune by reason of a previous attack may be permitted to remove from the premises provided they do not return until quarantine is lifted. Exposed adults shall not be restricted providing they do not come into immediate contact with the patient or articles soiled by his discharges. Exposed susceptible children may, with the permission of the health commissioner, be removed to a house or place in which there are no children, where they may be released after a period of seven days, providing no symptoms of the disease have developed. If such children are not removed from the house in which the patient resides they shall remain until disinfection and for an additional period of seven days. (2) *Residing apart from the patient.* Exposed susceptible children shall be quarantined for a

period of seven days from the date of last exposure to the disease. Exposed adults and immune children shall not be quarantined.

*Disinfection:* Concurrent disinfection of all articles which have come in contact with the patient and of all articles soiled by discharges from the patient.

Thorough cleansing of the sickroom and premises when the patient is released.

#### SMALLPOX

*For the patient:* Isolation until recovery is complete and desquamation has entirely ceased.

*For exposed persons:* (1) *Residing in the house or place with the patient.* Exposed persons who are immune by reason of a previous attack or by successful vaccination within five years, shall be permitted to remove from the house provided they do not return until the quarantine is lifted. Immune persons who do not remove from the house must remain until quarantine is lifted.

Susceptible persons must remain in the quarantined house, unless they are vaccinated within four days of first exposure, when they may be permitted to remove providing they remain under the observation of the health commissioner or some physician appointed by him.

Susceptible persons who refuse vaccination or who are vaccinated later than four days following first exposure shall remain in the quarantined house until disinfection is performed, and for an additional period of seventeen days, unless seventeen days shall have elapsed since the time of successful vaccination.

(2) *Residing apart from the patient.* Exposed persons who are immune by reason of a previous attack, or by successful vaccination within five years, shall not be quarantined.

Exposed persons who are vaccinated within four days of the first exposure shall be kept under observation for a period of twelve days by the health commissioner or some physician appointed by him, but shall not be quarantined.

Exposed persons who cannot be vaccinated within four days of the first exposure, but who are later vaccinated, shall be quarantined until there is plain evidence of successful vaccination or until seventeen days from the date of last exposure to the disease.

Exposed persons who refuse vaccination shall be quarantined for seventeen days from the date of last exposure to the disease.

*Disinfection:* Concurrent and terminal disinfection shall be required by the health commissioner.

#### TRACHOMA

*For the patient:* Exclusion from school, public or private institutions, and other public gatherings until the disease is no longer communicable. No person with trachoma shall be admitted to school or other public or private institution or public gathering except on presentation

of a physician's certificate, satisfactory to the health commissioner, that the patient is no longer capable of communicating the disease. Inmates of children's homes, county infirmaries and similar institutions shall be isolated in the institution until they are no longer capable of communicating the disease.

*For exposed persons:* There shall be no restriction of exposed persons.

*Disinfection:* Concurrent disinfection of all articles soiled with discharges from the eyes. The use of separate towels and washing utensils is required.

#### TUBERCULOSIS

*For the patient:* Exclusion from schools and other public gatherings of all tuberculous persons capable of transmitting the disease.

*Disinfection:* Concurrent disinfection of all discharges from tuberculous lesions, particularly the sputum and nasal discharges, and of all articles coming in contact with such discharges.

Thorough cleansing or terminal disinfection following death or recovery.

#### TYPHOID AND PARATYPHOID FEVER

*For the patient:* Isolation until recovery is complete and typhoid and paratyphoid bacilli have disappeared from the urine and stools. Provided, that the bacteriological methods of release may be applied or omitted in the discretion of the health commissioner. The placard on the house shall not preclude entry and exit, but shall be placed thereon as a warning to visitors. Milkmen and other persons shall not remove milk utensils from a house so placarded.

*For exposed persons:* There shall be no quarantine of exposed persons, but the health commissioner shall recommend the use of antityphoid vaccine and take measures to facilitate its use.

*For typhoid and paratyphoid carriers:* Persons who are found to be typhoid and paratyphoid carriers shall be restricted in accordance with the instructions of the state commissioner of health. In no case shall such carriers engage in any occupation connected with the food or milk supply.

*Disinfection:* Concurrent disinfection of the stools and urine and of all articles coming in contact therewith.

#### WHOOPING COUGH

*For the patient:* Isolation of the patient for a period of at least two weeks from the development of the characteristic cough. Such isolation shall be construed to imply confinement to the house, rooms or apartment, except that the patient may be permitted to go into the streets when under the observation of a responsible person, providing he wears in plain view on the upper left arm a band on which there shall be



printed the words "Whooping Cough" in letters no less than one inch in height.

*For exposed persons:* (1) *Residing in the house with the patient.* Quarantine of susceptible children until fourteen days from the release of the patient. (2) *Residing apart from the patient.* Quarantined of susceptible children for a period of fourteen days from the time of last exposure to the disease. Provided that when the date of first exposure is accurately known or can be definitely determined, susceptible children shall be quarantined only from the seventh to the fourteenth day following such exposure.

*Disinfection:* Concurrent disinfection of the discharges from the nose and throat of the patient and of articles soiled with such discharges. Cleansing of the sickroom when the patient is released.

#### FAVUS, TINEA, IMPETIGO CONTAGIOSA, SCABIES AND MUMPS

*For the patient:* Exclusion from school and other public gatherings until the disease is no longer communicable, and the patient presents a certificate to that effect from a physician, satisfactory to the health commissioner.

*Disinfection:* Concurrent disinfection by appropriate methods to destroy the viable agents of these diseases, and to disinfect contaminated articles.

#### ASIATIC CHOLERA, BUBONIC PLAGUE, TYPHUS FEVER AND YELLOW FEVER

In case a health commissioner knows or suspects the presence of Asiatic cholera, bubonic plague, typhus fever, or yellow fever, he shall immediately notify the state commissioner of health by telegraph, and shall quarantine the case or suspected case and every person who has been exposed until the state commissioner of health or some person appointed by him, takes charge of the situation.

**REGULATION 17, (DISINFECTION.)** *Concurrent disinfection* shall be practiced by the person or persons in charge of the patient during the course of the diseases for which it is required in these regulations, and shall consist in the immediate destruction of disease producing organisms in the discharges of the patient, and in articles soiled by such discharges, by burning, or by immersion in boiling water, or in carbolic acid and water in the proportion of one in twenty, or in some other solution of equivalent strength or efficiency. Fecal matter shall be disinfected by being thoroughly broken up and placed in milk of lime solution, made by adding four parts of water to one part of freshly slaked lime, or in some solution of equivalent strength or efficacy.

*Cleansing* shall be practiced by the person or persons in charge of the premises where a patient has been removed or has died or recovered from a disease in which cleansing is required in these regulations. Cleansing shall be performed

under the direction of the health commissioner and shall consist in scrubbing with hot water and soap, with some disinfectant solution equal to carbolic acid in the proportion of one in twenty, or by other mechanical means, of all surfaces and materials which have been soiled by or exposed to infectious material. When in the judgment of the health commissioner it is impossible to cleanse the sickroom or premises thoroughly, disinfection with gaseous agents shall be performed in the manner provided for in these regulations.

*Gaseous disinfection* shall be performed by the health commissioner or by some person appointed by the health commissioner after the patient has been removed or has died or recovered from a disease in which cleansing or terminal disinfection is required in these regulations, when such cleansing in the opinion of the health commissioner can not be properly performed. Such gaseous disinfections shall be performed by vaporizing not less than sixteen ounces of forty percent commercial formalin for each one thousand cubic feet of space and the room or place being disinfected shall be maintained at a temperature of not less than seventy degrees Fahrenheit and properly sealed to prevent the escape of gas. Such other gaseous disinfectants may be used as the health commissioner may elect, providing they are equal in bactericidal strength to sixteen ounces of formalin for each one thousand feet of space.

#### Occupational Disease Reporting

Occupational disease reporting is sharply on the increase in Ohio, as a result of more faithful compliance by physicians in certain large industrial plants with the law requiring such reports.

Case reports in June totaled 184—more than were reported in the entire eleven months' period immediately preceding. The total for the year ended June 30, was 331.

A single industrial physician reported 152 of the June cases and thirty of the forty-one May cases. Another physician, reporting in April and June only, furnished thirty-six of the year's total of 331 cases.

A steady increase in occupational disease reports has been noticed for several months, and with large employers falling into line it is expected that before many more months the State Department of Health will be receiving enough reports to make the information valuable in the development of its industrial hygiene work.

While the law now contains a penalty clause against physicians failing to report occupational diseases, the department has as yet brought no prosecutions, preferring to bring about better observance of the law through willing co-operation of the physicians and employers rather than by coercion.

# Council Approves the Committee Appointments and Dispatches Routine Business at June Meeting

## MINUTES

Council of the Ohio State Medical Association met June 27, 1920, at the Hotel Deshler, Columbus. The following members were present: President Lukens, President-elect Teachnor, Ex-President Baldwin, Councilors Carothers, Ewing, Keller, Updegraff, McClellan, Headley and Goodman; J. H. J. Upham, chairman of the Committee on Public Policy and Legislation, and Executive Secretary Martin.

Dr. Platter, the treasurer, presented detailed statement of expenses of the annual meeting in Toledo, June 1, 2, and 3, 1920, which showed a total expense of \$3530.78. Receipts from banquet tickets \$1715, and from exhibit space, \$1455, amounting to \$3170. Deficit of \$360.78 was covered by the contingent appropriation from the State Association, amounting to \$400, leaving a balance in the state meeting fund of \$39.22. On motion of Dr. Keller, seconded by Dr. Baldwin, Council authorized the Committee on Auditing and Appropriations to transfer from the unassigned funds to the annual meeting fund, an additional sum of \$400 to meet bills incurred this year for the next annual meeting. Dr. Carothers moved that the next annual meeting be held on Tuesday, Wednesday and Thursday, May 3, 4, and 5, 1921, in Memorial Hall, Columbus. Seconded by Dr. Headley. Carried.

Dr. Lukens, the president, with the approval of Council, announced the appointment of the following committees:

## STANDING COMMITTEES

Committee on Arrangements for Annual Meeting—S. J. Goodman, chairman, Columbus; Wells Teachnor, Columbus; Robert Carothers, Cincinnati. Committee on Auditing and Appropriations—S. J. Goodman, chairman, Columbus; John G. Keller, Toledo; J. S. McClellan, Bellaire. Committee on Medical Education—Charles Edwin Briggs, chairman, Cleveland; Ben R. McClellan, Xenia; William D. Porter, Cincinnati. General Secretaries Committee—Wells Teachnor, chairman, Columbus; C. R. Keller, Mansfield; Reyburn McClellan, Xenia; George S. Mytinger, Chillicothe.

## SPECIAL COMMITTEES

Committee on Health Education—E. O. Smith, chairman, Cincinnati; P. B. Brockway, Toledo; A. G. Helmick, Columbus; J. O. Howells, Bridgeport; G. E. Robbins, Chillicothe. Committee on Hospitals for Crippled Children—B. G. Chollett, chairman, Toledo; A. H. Freiberg, Cincinnati; A. M. Steinfeld, Columbus. Committee on Hospital Standardization—Andrews Rogers, chairman, Columbus; C. F. Hoover, Cleveland; Robert Carothers, Cincinnati. Committee on Control of

Cancer—Andre Crotti, chairman, Columbus; C. W. Moots, Toledo; J. Louis Ransohoff, Cincinnati.

In compliance with the request of Dr. Bliss, president of the Ohio Public Health Association, and by direction of the House of Delegates, Council appointed Dr. C. W. Waggoner of Toledo, and Dr. F. E. Bunts of Cleveland, to serve on the board of trustees of the Ohio Public Health Association.

Dr. Teachnor moved that a Committee on Program for the next annual meeting be appointed from membership of Council. Seconded and carried. Dr. Lukens announced the appointment of Drs. Goodman, Updegraff and Carothers to serve on the above committee.

After discussion of that part of the President's Annual Address relating to the Medical College of the Ohio State University, Dr. Updegraff moved that a committee of three be appointed to further consider the recommendations made by Dr. Baldwin, to report at the next meeting of Council. Seconded by Dr. Carothers. Carried. Dr. Lukens announced the appointment of Drs. Baldwin, Carothers and Updegraff as members of this committee. On motion of Dr. Baldwin, seconded by Dr. Carothers, President-elect Teachnor was made ex-officio chairman of this committee. After discussion by Dr. Upham, Dr. Baldwin, Dr. Lukens, and others, relative to advisability of publishing the address in *The Journal*, Dr. Carothers moved that the entire paper be set and a galley proof be sent to each member of Council and to members of the Policy Committee and the special committee which reported on the address at the annual meeting, for further consideration and final determination by Council. Seconded by Dr. Updegraff. Carried.

A membership statement submitted by the Executive Secretary showed that on this date there are 4678 members in good standing as compared with 4531 on the same date last year. The total paid membership for the entire year 1919 was shown to be 4692, and the prospects for exceeding this number before the end of 1920 were declared to be most encouraging.

Conforming to the policy adhered to in previous years, Council by resolution introduced by Dr. Keller, seconded by Dr. Carothers, authorized the secretaries of all county societies to accept dues for new members at \$3.00 from July 1 to October 1; at \$2.00 from October 1 to December 31.

On the matter of procedure in auditing bills and authorizing payment, on motion by Dr. Updegraff, seconded by Dr. Keller, the chairman of the newly appointed Committee on Auditing and Appropriations was authorized to approve, on behalf of his committee, all routine bills for items for which appropriation has already been



made in the budget. Council directed all other bills to be audited and approved by each member of the committee.

A brief report on medical defense shows that since January 1 of this year there have been ten suits filed for malpractice against members of the Association; five threatened actions, and two inquiries, indicating probable action. In three of the ten suits already commenced, the defendants were protected by private indemnity policies and the defense of these cases is being conducted by such insurance companies, with the cooperation of the Association. Emphasis was placed on

the necessity of members paying their dues promptly and maintaining their good standing constantly as the medical defense committee was compelled to refuse defense in two of the suits already begun, because the physicians were in arrears with dues at the time the alleged causes of action occurred.

On motion, seconded, Council adjourned to meet Sunday, October 3, at the same time and place.

Sylvester J. Goodman, M. D.,  
Secretary of Council.

## OHIO HOSPITAL NOTES

Practically all comments and reactions concerning the new medical and surgical fee schedule, operative since June 1, under the Workmen's Compensation law, and the hospital schedule, effective one month later under the same state provisions, so far have been favorable. Many commendatory comments have been heard relative to the more adequate provision for medical services stipulated in the new schedule. The State Industrial Commission, and particularly the medical department, has indicated a willingness to co-operate to the fullest extent with those who have dealings with or claims against the commission.

The new rates of compensation to hospitals are based on the operating cost per day for the last calendar year. While the Industrial Commission has requested all hospitals to submit full data including annual reports, a number have so far failed to do so. At the same time, the Commission communicated with the hospitals setting forth the new plan, a blank contract was included and request made that such blanks be properly filled out, certified and returned immediately. Those hospitals which failed to make such return must be satisfied with awards for service not in excess of \$14.00 per week for ward service and \$18.00 per week for private room service, according to the old schedule, without remuneration for any extras. Under the new plan no additional charges are to be filed for operating room service, hospital anesthetists, drugs, laboratory or X-ray services, these being contemplated in figuring the per diem cost of operation per patient during the past year.

This new schedule for compensation for hospitals was decided in agreement between the commission and the members of the Ohio Hospital Association at their annual conference in Columbus recently, and based on results adopted by the Ohio Section of the American Hospital

Association, with which organization the former association became affiliated.

Four brief rules have been set forth by the Industrial Commission governing the claims submitted for the care of hospital patients who are beneficiaries under the Workmen's Compensation Act. These rules are:

1. Hospitals in submitting bills must indicate contract number and number of days of claimant's residence in hospital, together with the date of admission and dismissal.
2. Patient per day cost shall not include cost based in any part upon its capital investment.
3. No additional bills for hospital anesthetists, drugs, dressings, X-ray service, laboratory service, operating room or board of nurses will be paid by the Industrial Commission.
4. Special nursing when necessary will be paid for by the Industrial Commission.

A 300-bed hospital to be operated in conjunction with the College of Medicine of Ohio State University, has been recommended to the Central Philanthropic Council by Dr. H. M. Platner, secretary of the State Board of Medical Registration, as the best method of meeting Columbus' hospital needs.

—Miss Anna Richmond of Ithica, New York, has assumed her duties as chief nurse at the United States Marine Hospital, Cleveland. During the war Miss Richmond was assistant head nurse of the American Red Cross gas hospital at Bellevue, France.

—Rules and regulations governing the keeping of histories of all patients at Springfield City Hospital have been formally adopted by the hospital board and became effective in July. Under the new regulations, which conform with the plans of the American College of Surgeons in its endeavor to raise the standard of hospitals, case histories will be examined monthly by a record committee, composed of the hospital superintendent, a member of the staff and a physician who is not a member of the staff.

—Dr. C. E. Holzer has purchased Riverview Hotel, Gallipolis, for use as an addition to his hospital. The hotel property is being remodeled

throughout and will give the hospital 36 additional rooms for convalescent and patients taking radium treatment. Plans are also being considered for a nurses' home, to be used in connection with the training school to be established in September.

—Toledo's new Maternity Hospital, opened in June, is ideally located overlooking the river and permitting a maximum amount of sunshine and lake breeze. The work of the institution, which has a capacity of 90 beds, of which 60 are for babies, encompasses maternity and children's cases exclusively. There are three children's wards accommodating 40 patients and a nursery for 20 new-born infants. One of the principal activities of the hospital is a dispensary service for pre-natal and post-natal instruction.

—Plans have been completed by Dr. J. P. Harbert of Bellefontaine for the enlargement of his eye, ear, nose and throat hospital. The hospital, opened last January, has cared for more than 140 patients.

—For care of indigent patients from Preble County, Miami Valley Hospital, Dayton, will receive \$2.50 a day, according to a contract entered into by the institution and the County Commissioners. A fee of \$5 to \$10 is to be paid for each use of the surgical room, and \$2.00 for each use of the X-ray equipment.

—Dr. Stephen A. Douglass, superintendent of the Ohio Tuberculosis Sanatorium, Mt. Vernon, since 1912, has tendered his resignation, to become effective September 1. Upon his retirement Dr. Douglass will engage in post-graduate

study in New York and will later locate for private practice in Ohio, specializing in the diagnosis and treatment of tuberculosis.

—A bond issue of \$200,000 for the erection of a hospital as a memorial to Greene County soldiers, sailors and marines will be voted on at the August 10 primaries. The bond issue was authorized following the presentation of a petition from the American Legion requesting that this honor be accorded.

—An addition to the nurses' home at Mercy Hospital, Hamilton, is being constructed, at a cost of \$75,000.

—In response to a request for bids on the erection of a cottage at the Ohio Epileptic Hospital, Gallipolis, the State Board of Administration received but one bid, for \$73,000, which has been rejected because the appropriations available will not permit the expenditure of such a sum. Building of a similar cottage five years ago cost the state \$18,000.

—Dr. R. C. Kirkwood, former resident physician at the tuberculosis sanatorium at Prescott, Arizona, has taken up similar work at Rocky Glen Sanatorium, McConnelsville.

—Due to the large number of War Risk Insurance cases and the industrial cases treated at Cincinnati General Hospital during the first three weeks of June, the income from those sources amounted to approximately \$10,000, according to Dr. A. C. Bachmeyer, superintendent.

—Plans have been approved for the construction of a \$60,000 hospital building on the campus of Miami University, Oxford.

## “Don't Tread On Me”

The Serpent of the Academy Seal Has Two Meanings, But There is Nothing Ambiguous About It.

[From No. 1, Vol. 1 of the *Bulletin*, Published by the Academy of Medicine of Cleveland.]

The Academy of Medicine of Cleveland, has adopted a new seal—the first in its history.

Its design is very simple.

It represents the classical staff and serpent, representing medicine, surcharged across the seal of the City of Cleveland as it appears on the official Cleveland flag.

But the serpent is more than merely allegorical. It is alive. It has opened its mouth, protruded its fangs and hissed in unmistakable terms the defi that our Revolutionary ancestors sent to the King of England, “Don't Tread on Me.”

### WHY DOCTORS ARE MISUNDERSTOOD

The profession has been handicapped heretofore because it had no layman to speak for it. Members of the profession, even when officers of the Academy, have felt a professional delicacy against putting themselves forward in the newspapers, except on especial provocation. There was danger, they thought, of being misunderstood by fellow members of the profession, as well as misunderstood and misquoted by the news-

papers. Often the rush of their private practice has kept them from giving attention to public matters concerning the profession.

As a result, attacks went unanswered, and the feeling was engendered that any one who felt so inclined could take a kick at the profession without fear of retribution—like an old hat in the street.

The time has come to serve notice to whom it may concern that there is a brick in the doctor's hat now, and that any one who takes a free kick is likely to hurt his foot.

### TO SOCIALIZE MEDICINE

“Compulsory Health Insurance” is the polite name for the latest outrage cooked up by outsiders for the doctors to swallow without their knowledge or consent. “Compulsory Health Insurance” proposes to socialize the doctors in Ohio as they have been socialized in Russia. The idea is to legislate the medical profession, against its will, into a class of overworked and underpaid government employes, like the public school teachers and the postoffice employes.

Ask yourself this: “Will the legislature ever



socialize the lawyers? Will that profession ever be deprived of its individuality, in character, its initiative, its incentives and opportunities—the things America stands for?" Answer: Not right away. Not while the lawyers have a majority in that same legislature. But "Hang it on the doctors, they never kick."

#### EXECUTIVE SECRETARY

In Cleveland the day when the doctors don't kick is gone forever—like three-cent fare. The doctors have already begun to kick, and they are going to keep on kicking until the newspapers, the politicians and the uplifters find some other dog to tie all the community tin cans to. And the heels of the mule that is going to do the kicking is the new executive secretary, now installed at the offices of the Academy at 2318 Prospect Avenue.

American labor will never be for so-called "Compulsory Health Insurance" when it understands it. Labor is not for it in Germany or England, where the system has failed dismally. "Compulsory Health Insurance" is a Marxian dream which has been a signal failure in the only country in the world where it could ever have been expected to succeed—Germany.

#### FAILS IN ENGLAND

The Utopian dream was introduced into England, from the German model, in 1911-12, by Lloyd George as a great political smoke screen or diversion to draw attention from his failure to keep his campaign promise to divide the large estates among the people. After five years of trial the workmen are disgusted with the plan, taxpayers are sick of it, and the medical profession has been reduced to a state of weakness, disorganization and despair which finds its counterpart in America in the postoffice department and some other branches of the public service.

Many of the best physicians have left medical practice. Low pay and lack of money to keep up their education and equipment has resulted in widespread carelessness and inefficiency. The profession is so unattractive that young men of the right sort can no longer be induced to enter medical school. The profession is becoming overrun by ignorant quacks and charlatans, who get politico-medical jobs and live by doling out pills of no medicinal value to trusting working people. Many workmen are beginning to see that they can expect no real medical service from physicians who have only time to give each case a lick and a promise and rush on to the next one. Doctors under compulsory health insurance have to work fast to make a living at the minimum wage set for their services by the uplifters. So the wise workman, when he wants a doctor, goes out and hires a real one, at the same time that he is paying taxes and a premium out of his wages to support the political health service.

#### RADICALS ARE FOR IT

In America labor is on the fence regarding Compulsory Health Insurance. Conservative la-

bor leaders are against it. Radicals for it. The people who are doing all the fighting for it are uplifters or reform promoters, who open offices and gather in the dollars of the sympathizers of more or less radical tendencies and well-meaning people who allow others to do their thinking for them.

These uplifters know from experience in Europe that the system will benefit nobody but themselves, who, without scientific qualification of any kind, will get fat jobs at the state capitol overseeing the medical men who will do all the work at starvation wages.

Ole Hanson of Seattle said, "If the militia are called, some one else will have to do it. We won't be here then." The Reds are at work in Ohio now as they were in Seattle then.

If Socialized Medicine ever becomes a law in Ohio it won't affect the medical profession, because, by that time, there won't be any medical profession.

#### Small Advertisements of Interest

*For Sale*—House and office in good town in Ohio. Excellent location, roads and collections good. Address H. Dickson, M. D., Mechanicsburg, Ohio.

*Wanted*—Physician to take over general practice of late Dr. G. D. Swett in town of 600 inhabitants. Best location in southern Ohio and needs another physician. Wish to rent office and sell office equipment at invoice. Electricity and water. For particulars address, with stamp, Mrs. G. D. Swett, Albany, Ohio.

*Location for Physician*—The village of Bowerston, Harrison county, is without a physician and desires one to locate there. Bowerston is well able to support a physician as there is a large surrounding territory to cover and no other physician within six to ten miles. This should be a good location for a young man. Detailed information may be secured from Mr. O. W. Penn, Bowerston.

*Wanted*—Assistant physician at the Ohio Hospital for Epileptics, Gallipolis, Ohio. Single man preferred. Salary \$1320 to \$1800 per year and maintenance. Apply to G. G. Kineon, M. D., Superintendent.

*Wanted*—Location in city; or prosperous town with modern improvements, A1 schools and church, by physician with seven years experience in general practice in one location which has just sold. James F. Wilson, M. D., Limaville, Ohio.

#### Health Service Augmented

Because the number of disabled service men who are asserting their claims to medical treatment from the government has grown enormously, the Treasury Department at Washington, which has supervision over activities of the United States Public Health Service under the War Risk Insurance Act, has authorized a large increase in the personnel at the Ohio headquarters of the service at Columbus.

# MEDICAL COMMENT ABSTRACTS AND CURRENT TOPICS OF INTEREST

**T**HE PUBLICATION COMMITTEE IS MORE THAN ANXIOUS TO MEET THE NEEDS OF THE JOURNAL'S READERS. IN CONSEQUENCE THE MEDICAL EDITOR IS INITIATING A NEW DEPARTMENT TO BE DEVOTED TO MEDICAL COMMENT, ABSTRACTS, AND CURRENT TOPICS OF INTEREST TO THE GENERAL PRACTITIONER. THE EDITORIAL POLICY OF THIS NEW DEPARTMENT WILL BE ONE OF SERVICE AND SUGGESTIONS AND CONTRIBUTIONS WILL BE GRATEFULLY RECEIVED.—MCM.

## The Babcock Method for the Immediate Sterilization and Closure of Chronic Infected Wounds of Bones and Soft Tissues

**D**R. W. WAYNE BABCOCK, of Philadelphia, *New York Medical Journal*, June 21, 1919, described this method as follows:

1. *Skin preparation*.—If possible the wound area should be prepared by daily shaving, washing with soap and water, removal of all scabs and crusts, and the application of two per cent yellow oxide of mercury ointment for three days preceding the operation.

2. *Wound sterilization*.—On the operating table, the skin is: a. Thoroughly scrubbed with "B" solution (Liquor cresolis compound 2, turpentine 10, and gasoline 88 parts). b. Painted with three per cent. solution tincture of iodine. c. Sterilized by a saturated chloride of zinc solution, thoroughly injected under pressure into all sinuses and cavities, applied to all unhealed and granulating surfaces, and rubbed over the scar and skin adjacent to the wound. Five minutes are allowed for the penetration of the zinc solution, and great care is taken that every recess of the wound is reached.

3. *Color delineation*.—The following antiseptic staining solution is then thoroughly applied to all eroded surfaces, and injected under pressure into all cavities and sinuses:

Saturated alcoholic solution of methylene blue .....	20
Caustic potash .....	3
Phenol .....	5
Ether to make.....	100

As soon as this solution has evaporated, the exposed granulating surfaces are left dark blue black, dry, bloodless on manipulation, and sterile. If a section is made through the sinus, it will be found that the coloring has penetrated to a depth of one to three millimeters. Outside of this is a much wider zone of a vascular, grayish white tissue that has been sterilized and devitalized by the zinc chloride. (Even sequestra removed from deep bone cavities produce no growth on culture media.)

4. *Excision of infected area*.—The entire field is again painted with tincture of iodine and a very free skin incision made, so planned as to permit later closure and to surround and be well

outside of all scars and sinuses, which are to be excised as near as possible *en bloc*. The instruments are now changed, the skin margins well separated from the adherent underlying tissues by traction with sharp retractors, and dry towels or gauze clipped in position to protect all skin margins. The incision is now deepened to the bone; the periosteum is freely incised, retracted, protected by towels or gauze, and, beginning some distance from the disease, with sharp chisels, the infected bone is freely excised with the attached overlying skin, scars, and sinuses. Care is taken not to completely divide the bone.

A blue color indicates that all infected areas have not been excised, and the incision is to be continued. The operator should work outside the septic focus and use very sharp knives, gouge, and chisels, rather than curettes, which tempt one to work from within out. If possible, all soft tissues and bone should be removed to a distance of at least one centimeter external to the blue coloration. The bone incisions are so placed as to leave smooth surfaces with no holes, gutters, cups, or pockets that will remain as "dead" spaces when the soft tissues are closed, and the incision should leave only well vascularized bone and soft tissue—free from bone chips and splinters.

5. *Wound closure*.—The muscles and soft tissues are sufficiently freed from the skin, bone, and each other, to fit into the bone defects. Bleeding is carefully controlled with the smallest amount of plain catgut. If necessary a few fine catgut sutures are used to unite the deeper tissue layers, and the skin is closed with silkworm gut. In very large wounds, one or two small tube drains may be left between stitches to drain the depths of the wound for the first twenty-four or forty-eight hours. Only a dry technic is to be employed. Any excess of zinc chloride may, if necessary, be neutralized by a ten per cent solution of sodium bicarbonate. This is rarely necessary. Voluminous very wet boric alcohol dressings are applied until all tissue reaction has subsided and healing has occurred.

### EDITORIAL NOTE

**I**N a communication on this subject Dr. Babcock states:

"(1) Bone sinuses must not be forcibly injected without protecting the general circula-



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Serology—John Hermanies, M. D.

Radiology—C. C. Birkelo, M. D.

tion by a tourniquet as there is at times a direct communication with the interior of veins.

"(2) The sterilized tissue must be excised if near blood vessels."

#### Coccygodynia: Further Experiences with Injections of Alcohol

IN addressing the recent meeting of the American Proctologic Society, June, 1919, Dr. Yeomans said that theories advanced for the causation of the leading symptoms, pain in the region of the coccyx, are: 1. Neuralgic, 2. Neuritic, 3. Injury and 4. Sympathetic. The first three are based on traumatism and comprise the major number of cases. The traumatism is within the pelvis as in labor or external as a fall. As a rule the periosteum of the coccyx only is injured and the soft parts adjacent to the bone. Injury of these structures initiates an inflammatory reaction with proliferation and later contraction of the new-formed fibrous tissue and compression of the nerves which traverse it, causing neuralgia or neuritis. Fracture or dislocation of the coccyx may cause pressure pain.

The characteristic pain is spasmodic and aching, aggravated by sitting or rising, but not affected by urination or defecation.

The diagnosis is made by a bidigital examination—the index finger in the rectum, the thumb making counter-pressure outside—thus palpating the coccyx and compressing the soft parts adjacent to it, to determine the portion of the coccygeal plexus of nerves involved.

There must be excluded diseases of the spine and of the nervous system, as tabes, and locally lesions of the anal canal and rectum simulating coccygodynia, as anal fissure, cryptitis, papillitis, blind internal fistulae, thrombosed hemorrhoidal veins, proctitis and foreign bodies in the rectum; also, in women, disease of the external and internal genitals and, in men, of the uro-genital organs.

The prognosis in general is good on the ground that the pain resides in the coccygeal plexus of nerves and not in the bone as was formerly supposed.

The treatment is an application of the principle of injecting sensory nerves with 80 per cent. alcohol, thereby causing their degeneration, as suggested by Schlosser in 1907, and practised with marked success in trifacial neuralgia.

#### TECHNIQUE

THE injections are made aseptically, without anesthesia, at the office. A sterile syringe is filled with 30 per cent. alcohol and armed with a 2 inch needle of fine gauge. The point of maximum tenderness is determined bidigitally, then, maintaining the index finger in the rectum as a guide, the needle is carried through the skin of the midline to the tender spot and 10 to 20 minims are injected slowly. The interval between injections is five to seven days.

The writer has had 28 cases in all of which he

treated 24; and of these 20 were female and 4 males.

External trauma was responsible for 15 cases; difficult labor, 3; 2 followed local operations and in 4 the cause could not be determined.

The duration of the pain before operation was from three weeks to fifteen years, averaging 22 months.

The number of injections varied from one to ten, average four.

Results of treatment: clinically cured, 16; relieved, 7; failed, 1.

Elapsed time since treatment varies from three months to nine years.

The only case of failure was in an otherwise healthy, robust girl, aged 10 years. As no benefit followed ten injections, the writer excised the coccyx in October, 1915, with immediate relief of pain and no recurrence.

#### Fashions in Drugs

VARYING vogues in drugs are quoted in *The Lancet* (London, May 31, 1919,) from Director Grimbert, of the central pharmacy serving all the Paris hospitals, who has published figures for the last decade. Says this paper:

"Our Paris correspondent, to whom we owe the information, acutely remarks that a drug, though at one time abandoned for others, may return to favor again later at their expense. He recalls Trousseau's aphorism, addressed to a patient for whom he was prescribing, 'Take this quickly, while it is still a cure.' Mr. Grimbert finds that the consumption of 'classical remedies' has remained practically stationary for the last twenty years; under this heading he includes morphin hydrochlorid (forty pounds annually), cocain hydrochlorid (twenty-two pounds), sulfates of sodium and magnesium, bicarbonate of sodium, bismuth subnitrate, antimony, rhubarb, and senna. Other drugs the use of which has not changed materially during the decade under review are opium (eighty pounds), laudanum, quinin sulfate, pyramidon, naphthol, benzonaphthol, chloroform, sodium cacodylate, and adrenalin. Antiseptics, with the exception of formol, are rapidly losing vogue in Paris, and this applies also to the iodids and bromids. A more gradual decline is to be noted in the employment of hydrogen peroxid, trional, sulfonal, glycerin, cod-liver oil, and quinin. There is a rapid increase in the use of novarsenobenzol (8,500 doses in 1912, 130,000 in 1918), aspirin, formol, urotropin, theobromin, veronal, and iodotannic sirup; and a rise, less rapid but still considerable, in the use of collargol, protargol, sulfuric ether, sodium benzoate, tincture of iodine, and endocrane extracts. Others are uncertain in their popularity, such as glycerophosphate of calcium, methyl salicylate, and calomel. Certain popular drugs have only recently been inscribed on the official list—e.g., novocain in 1908, colloidal silver



in 1909, arsenobenzol in 1911, novarsenobenzol in 1912, and galyl in 1915. Other new remedies still on trial in Paris hospitals include certain colloidal metals and organotherapeutic extracts prepared for intravenous medication."

### Physical Inspection Beneficial

That the report that medical inspection work in industries has contributed to the relief of workers suffering from diseases which otherwise would not be attended to; to gaining for them better health; to prolonging their lives and enabling them to continue their employment were pointed out recently in an address before the Chamber of Commerce of Cincinnati by Dr. C. P. McCord of the Medical Department of the University of Cincinnati.

Dr. McCord said that there was on an average 3,700 people a day absent from among the 125,000 working people in Cincinnati. Much of this absence could be cut down with proper medical supervision, he said. The loss of time is a great economic loss to the city's industries, he declared.

Dr. McCord said that about 5 per cent. of the large employers in Cincinnati had proper medical departments connected with their factories. He advised small factories and shops to form groups so that the work could be carried on economically.

The result of medical inspection work was to relieve workers of suffering from diseases which otherwise would not be attended to, by giving them better health, by prolonging their lives and by enabling them to keep on the job, he said.

### New Books

*The Treatment of Wounds of Lung and Pleura*, based on a study of the mechanics and physiology of the thorax. Artificial pneumothorax, Thoracentesis. Treatment of Empyema. By Professor Eugenio Morelli, assistant in the Medical Clinic of the Royal University of Pavia, Maggiore Medico, Field Hospital No. 79. Translated from the Italian by Lincoln Davis, formerly Lieutenant-Colonel, M. C. U. S. Army, and Frederick C. Irving, formerly Major, M. C., U. S. Army. W. M. Leonard, publisher, Boston.

*Human Parasitology*—With notes on Bacteriology, Mycology, Laboratory Diagnosis, Hematology and Serology, by Damaso Rivas, M. D., Ph.D., Assistant Professor of Parasitology and assistant director of the course in Tropical Medicine, University of Pennsylvania, octavo volume of 715 pages with 422 illustrations and 18 plates most of which are in colors. Philadelphia and London: W. B. Saunders Company, 1920. Cloth \$8.00 net.



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DETROIT



The State Medical Board has been very active in the prosecution of illegal practitioners (cults and otherwise) throughout the state, though prosecution of chiropractors has been temporarily arrested pending the decision of the Court of Appeals. The board retains the full-time services of an inspector for Cleveland and vicinity, and part-time service of an inspector for Akron, Canton and Youngstown.

In Cleveland alone since January 1st, approximately ten convictions have been had under the Talley law, while more than twice that number of offenders have left the state or discontinued practice. There are still pending in the Courts of Cuyahoga county a number of cases of illegal medical practice, and warrants taken out against twenty-one chiro's all await the decision of the Court of Appeals on the restraining order granted by Judge Powell of the Court of Common Pleas of Cuyahoga County.

#### HEARINGS

Dr. George S. Iddings, Cleveland, appeared before the board on July 6, to answer revocation charges based upon a conviction in the Municipal Court of Cleveland for violation of the narcotic laws. After consideration of the evidence and Dr. Iddings' promise to refrain from treatment of drug addicts, the case was dismissed.

Action in the revocation case of Dr. William A. Charters who was recently convicted of felony in the Common Pleas Court of Marion county, and sentenced to a term in the Ohio penitentiary, was postponed until the next meeting of the board in October.

Two other Ohio physicians appeared before the Board, July 6, in explanation of complaints filed against them in regard to certain practices involving fraud and fee splitting.

At the regular meeting of the State Medical Board on July 6 certificates to practice medicine in Ohio were awarded to 155 applicants who successfully passed the examinations conducted by the Board, June 8-11. This figure represents an increase of 27 over the number licensed by the board, after examination, a year ago. Listed, according to their schools of graduation, those admitted to practice are:

<sup>1</sup> OHIO STATE UNIVERSITY COLLEGE OF MEDICINE—Carroll G. Barber, Elvin J. Bateman, Will L. Beach, Everett T. Bonar, Clarence I. Britt, Wallace H. Buker, Paul R. Ensign, John E. Gamble, Morris Goldberg, Russell L. Guffey, James H. Holmes, Carl A. Hyer, Rudolph G. Lewis, Ernest F. Maag, Sarah L. Norton, Franklin H. Pennell, Robert B. Reed, Raymond A. Rogers, Glen D. Sheets, Merle E. Scott, Kenneth D. Sneyry, Edwin W. Troutman.

OHIO STATE UNIVERSITY COLLEGE OF HOMEOPATHIC MEDICINE—Charles H. Minor.

ECLECTIC MEDICAL COLLEGE—Jesse K. Bailey, Jr., Morris I. Berezin, Nathaniel Broadman, William W. Dangleisen, Frank W. Dannecker, Clifford G. Engle, Ercole Fiore, Matthew Fishman, Glenn Hankinson, Otto M. Hattendorff,

Walter S. Holley, Allie E. Howe, May C. Huling, Ethel M. Johnson, Percy Kensler, Louis F. LeSoine, Lazarus Lipschitz, Edgar H. Long, Charles A. Palmer, Russell M. Pierson, Rudolph Remark, Joseph A. Squillace, Bert M. Warne.

UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE—Fred Adelstein, Eslie Asbury, Ernest N. Beatty, Earl M. Britenburgh, Abraham Brown, Howard E. Busching, Earl N. Deppen, Matthew T. Donahue, Charles Friederick, Jr., Albert L. Haas, Davis S. Hachen, Louis M. Hohman, Karl W. Horn, James G. Jones, Robert A. Kehoe, Henry F. Kenkel, Cornelius V. Kilbane, Mary S. Knight, Frank T. Linton, Kenneth L. Lockwood, Alice F. Lyle, Edward S. McDowell, Howard D. McIntyre, George G. McKhann, Samuel G. Molinder, Rush C. Newman, Claude C. Payne, Victor Ray, Jr., Vernon B. Roberts, William R. Rogers, William McK. Runyan, William B. Scherr, Herbert N. Smith, Robert A. H. Stack, Clifford J. Strachley, Erwin M. Strachley, John F. Sutton, John F. Torrence, Robert B. Walker, Jerome Zeigler.

WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE—Ethan M. Abbott, Francis L. Becka, Francis H. Beckstead, Lothair J. Carson, Basil L. Connelly, Samuel Coopersmith, Porter J. Crawford, Guy V. Crouse, Carl C. Dauer, Joseph Deutsch, Clayton T. Dodge, Armen G. Evans, Clyde D. Frost, Harry E. Fusselman, Morris Grossman, Edward B. Hoeven, Clarence E. Hufford, Clarence P. Huston, Francis E. Ilyde, Morey P. Jeffery, Scott A. Jones, Louis J. Karnosh, Delbert V. Kechele, Raymond C. McKay, Roswell F. Machamer, James F. Machwart, Czerny E. Mulligan, Charles A. Muncaster, Edwin J. Oster, Howard T. Phillips, Rees Philpott, Erle E. Ross, James V. Seids, Alvin O. Sibila, William E. Smith, Louis M. Starin, George C. Strand, Louis Ungar, Samuel H. Volk, Spencer A. Wahl, Harry L. Weaver, Samuel H. Williamson.

CHICAGO COLLEGE OF MEDICINE AND SURGERY—John H. Murray.

HAHNEMANN MEDICAL COLLEGE, Philadelphia—William L. Hohart.

HARVARD MEDICAL COLLEGE—Augustus H. Galvin, Harris H. Vail.

HOWARD MEDICAL COLLEGE, Washington, D. C.—John B. Walker.

JEFFERSON MEDICAL COLLEGE, Philadelphia—Samuel H. Davidow, Leon H. Dembo, Arthur L. Jones, Moses H. Speck, Arthur L. Turner, Louis E. Wharton.

JOHNS HOPKINS UNIVERSITY COLLEGE OF MEDICINE—Reuben J. Erickson, Elmer P. Greenwalt, William O. Johnson, Clifford McC. Lane.

LOYOLA UNIVERSITY COLLEGE OF MEDICINE, Chicago—Charles W. Glover, Leo J. Piotrowski.

MEHARRY MEDICAL COLLEGE, Nashville, Tenn.—Henry H. Walker, John H. Taylor.

RUSH MEDICAL COLLEGE, Chicago—Clarence E. M. Finney, Hedwig S. Kuhn.

UNIVERSITY OF PENNSYLVANIA COLLEGE OF MEDICINE—William A. Neill, James S. Wilson, Jr.

UNIVERSITY OF PITTSBURGH COLLEGE OF MEDICINE—Lorraine E. Ramsey.

UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE, Norman, Okla.—Ray R. Moseley.

UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE—Harry M. Rambo.

VANDERBILT UNIVERSITY COLLEGE OF MEDICINE, Nashville, Tenn.—Monroe Cronstine, Glenn H. Reams.

Certificates to practice their special branches were issued to seven osteopaths, 18 chiropodists, four masseurs and six midwives. Out of a total of 15 osteopaths previously licensed, who took the examination to practice surgery, one met the requirements and was certificated to practice that specialty.

#### RECIPROCITY

Ohio's high standing in the estimation of physicians throughout the country is indicated by the large number of applications for reciprocity received by the State Medical Board. At the July 6 meeting, the Board broke all previous records by granting 47 reciprocity certificates. Those admitted to practice on this basis, with their schools of graduation and Ohio cities in which they expect to practice, are:

IRA ARTHUR ABRAHAMSON, Chicago—Graduate Marquette University, 1916; intended residence, *Norwood*.

CARL HENRY BAILEY, Jameson, Pennsylvania—Graduate University of Pittsburgh, 1911; intended residence, *Warren*.

CHARLES LLEWELLYN BASKIN, Akron—Graduate University of Michigan, 1912; intended residence, *Akron*.

EDWARD BINZER, Indianapolis, Indiana—Graduate Indiana University, 1919; intended residence, *Toledo*.

LOUIS DE M. BLOCKER, Pensacola, Florida—Graduate University of New York, 1889; intended residence, *Cincinnati*.



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NATHANIEL J. BROUGHTON, (Colored), Birmingham, Alabama—Graduate Meharry Medical College, 1905; intended residence, *Youngstown*.

ABRAM BRENNEMAN BRUNER, New York City—Graduate Columbia University, 1916; intended residence, *Cleveland*.

HIRAM B. CLOUD, Chicago—Graduate Chicago College of Medicine and Surgery, 1917; intended residence, *Canton*.

JOHN ANDREW COLLINS, Beaver, Pennsylvania—Graduate Washington University, 1902; intended residence, *Warren*.

FLOYD HARRISON COOK, Middletown, N. Y.—Graduate Syracuse University, 1907; intended residence, *Akron*.

FRANCIS JOSEPH DORAN, Cleveland—Graduate St. Louis University, 1919; intended residence, *Cleveland*.

ALAN DANIEL FINLAYSON, Cleveland—Graduate University of Vermont, 1910; intended residence, *Cleveland*.

MORRIS FRISHMAN, Pittsburgh, Pennsylvania—Graduate Johns Hopkins University, 1917; intended residence, *Akron*.

GEORGE WILBUR GETZE, Tarentum, Pennsylvania—Graduate Hahnemann Medical College, Philadelphia, Pennsylvania, 1906; intended residence, *Warren*.

JAMES POGUE GIBSON, Owensville, Indiana—Graduate St. Louis University, 1900; intended residence, *Roundhead*, (Hardin Co.)

GEORGE SEELEY GILPIN, Cleveland—Graduate Washington University, 1912; intended residence, *Cleveland*.

HORACE ENSIGN GROOM, Akron—Graduate Rush Medical College, 1919; intended residence, *Akron*.

FRANCES MABEL HARDY, Dayton—Graduate Rush Medical College, 1919; intended residence, *Dayton*.

FRED BLANCHARD HARRINGTON, Beaver, Pennsylvania—Graduate University of Buffalo, 1914; intended residence, *Steubenville*.

CHARLES EARL HOFFMAN, Cleveland—Graduate Creighton University, 1914; intended residence, *Cleveland*.

ROBERT DAVIS HOSTETTER, York, Pennsylvania—Graduate Jefferson Medical College, 1916; intended residence, *Dayton*.

MILTON EASLEY JONES, Baltimore—Graduate University of Maryland, 1915; intended residence, *Columbus*.

VENICE DUNCAN KEISER, Akron—Graduate Indiana University, 1917; intended residence, *Akron*.

HALIM BASIL KHURI, Akron—Graduate Columbia University, 1915; intended residence, *Akron*.

CLARENCE HOWARD KILKER, Cincinnati—Graduate St. Louis University, 1919; intended residence, *Cincinnati*.

JOSEPH GOODMAN KNAPP, Cleveland—Graduate Detroit College of Medicine and Surgery, 1915; intended residence, *Cleveland*.

JOHN FRANCIS LAMBERT, Syracuse, New York—Graduate Baltimore Medical College, 1903; intended residence, *Steubenville*.

WILLIAM NUNN LIPSCOMB, Cincinnati—Graduate University of Texas, 1913; intended residence, *Cincinnati*.

MYRON CORY LYONS, Cleveland—Graduate New York University, 1896; intended residence, *Cleveland*.

WALTER ELLSWORTH McCORKLE, Chicago—Graduate University of Illinois, 1919; intended residence, *Akron*.

JAMES SAUTER McNETT, Massillon—Graduate University of Pennsylvania, 1914; intended residence, *Massillon*.

CARL CLYDE NOHE, Akron—Graduate University of Maryland, 1917; intended residence, *Akron*.

ALFRED BERTHIER OLSON, Indianapolis—Graduate University of Michigan, 1894; intended residence, *Worthington*, (Franklin Co.)

BENJAMIN SPENCER PARK, Buffalo—Graduate University of Buffalo, 1919; intended residence, *Fairport*, (Lake Co.)

THOMAS ALLEN PEASE, Cincinnati—Graduate Eclectic Medical College, 1912; intended residence, *Cincinnati*.

BYRON JOHNSON PETERS, Cincinnati—Graduate Indiana University, 1916; intended residence, *Cincinnati*.

LINNELL LEONARD ROGERS, (Colored), Denver, Colorado—Graduate Meharry Medical College, 1916; intended residence, *Cleveland*.

JOSEPH ROSENFELD, Youngstown—Graduate Long Island Hospital Medical College, 1915; intended residence, *Youngstown*.

STELIOS N. SAKORRAPHOS, Pittsburgh, Pennsylvania—Graduate University of Athens, Greece, 1910; intended residence, *Akron*.

WALTER HALL Sisson, Wauseon, Ohio—Graduate University of Vermont, 1915; intended residence, *Wauseon*.

FREDERICK PELHAM SUTHERLAND, Martins Ferry, Ohio—Graduate Medical College of Virginia, 1916; intended residence, *Martins Ferry*.

METODI VELITCHKOFF, Chicago—Graduate University of Illinois, 1919; intended residence, *Cleveland*.

GEORGE HERMAN WELLBROCK, Dayton—Graduate University of Virginia, 1894; intended residence, *Dayton*.

HARRY RUPERT WERNER, Thomas, West Virginia—Graduate Eclectic Medical Institute, 1906; intended residence, *Akron*.

THEODORE ALAN WILLIS, South Euclid, Ohio—Graduate University of Iowa, 1910; intended residence, *Cleveland*.

ROLLIN DUANE WORDEN, Ravenna—Graduate University of Vermont, 1915; intended residence, *Ravenna*.

#### HOSPITALS RECOGNIZED

Sixty-one hospitals were officially recognized by the Board at the July meeting as meeting the requirements prescribed by law for conducting training schools for nurses. Fifty-four institu-

tions were granted recognition for a period of one year, and seven for one-half year. The complete list is as follows:

#### RECOGNITION UNTIL JULY 1, 1921

Akron City Hospital  
Alliance City Hospital  
Ashtabula General Hospital  
Aultman Memorial Hospital, Canton  
Ball Memorial Hospital, Piqua  
Bethesda Hospital, Cincinnati  
Bethesda Hospital, Zanesville  
Christ Hospital, Cincinnati  
Cleveland City Hospital  
Delaware Springs Sanitarium  
Deaconess Hospital, Cincinnati  
East Liverpool City Hospital  
Elyria Memorial Hospital  
Fairview Park Hospital, Cleveland  
Flower Hospital, Toledo  
Glenville Hospital, Cleveland  
Good Samaritan Hospital, Zanesville  
Grant Hospital, Columbus  
Hawkes Hospital of Mt. Carmel, Columbus  
Home and Hospital, Findlay  
Homeopathic Hospital, Columbus  
Huron Road Hospital, Cleveland  
Jane M. Case Hospital, Delaware  
Jewish Hospital, Cincinnati  
Lakeside Hospital, Cleveland  
Lakewood Hospital, Lakewood  
Lima City Hospital  
Lucas County Hospital, Toledo  
Marietta Hospital  
Massillon City Hospital  
Memorial Hospital, Fremont  
Mercy Hospital, Canton  
Mercy Hospital, Columbus  
Mercy Hospital, Hamilton  
Miami Valley Hospital, Dayton  
Mt. Sinai Hospital, Cleveland  
Ohio Valley Hospital, Steubenville  
Painesville Hospital  
Peoples Hospital, Akron  
Protestant Hospital, Columbus  
Providence Hospital, Sandusky  
Robinwood Hospital, Toledo  
Salem Hospital  
School of Nursing & Health, University of Cincinnati  
St. Clair Hospital, Columbus  
St. Elizabeth's Hospital, Youngstown  
St. John's Hospital, Cleveland  
St. Joseph's Hospital, Lorain  
St. Luke's Hospital, Cleveland  
St. Vincent's Charity Hospital, Cleveland  
St. Vincent's Hospital, Toledo  
Toledo Hospital  
Warren City Hospital  
Youngstown Hospital

#### RECOGNITION UNTIL JANUARY 1, 1921

Evangelical Lutheran Hospital, Cleveland  
Good Samaritan Hospital, Cincinnati  
Mercy Hospital, Toledo  
Seton Hospital, Cincinnati  
St. Rita's Hospital, Lima  
Good Samaritan Hospital, Sandusky  
Lancaster Municipal Hospital

Upon request of the institutions, recognition of the schools of nursing at Martins Ferry Hospital, St. Elizabeth's Hospital, Dayton, and Union Hospital, Dover, was discontinued. Recognition of East 55th Street Hospital, Cleveland, was postponed.

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### Pediatrics to be Subject of Post-Graduate Lectures

In recent years one of the most interesting features of Association activity has been that of the series of meetings for post-graduate study held annually under the auspices of the Medical Education Committee.

This season is to be no exception, and *The Journal* is highly pleased to announce that this committee, consisting of Dr. Charles E. Briggs, Cleveland, chairman, Dr. Ben R. McClellan, Xenia, and Dr. Wm. D. Porter, Cincinnati, has arranged to present Dr. Henry John Gerstenberger, professor of Pediatrics, Western Reserve University School of Medicine, as this season's lecturer.

After a thorough consideration of the various subjects of interest the committee felt that a presentation of the important phases of pediatrics would secure the most favorable interest.

Dr. Gerstenberger is now completing his lecture and prior to the series of group meetings an outline will be mailed to the members in the several sections of the state at which central points the meetings will be held. The lecture will be illustrated with lantern slides and charts.

Arrangements have already been made for Dr. Gerstenberger to be among the speakers at the annual meeting of the Second District Medical Society, which will be held in Dayton, September 20 to 24, when he will lecture for

three hours, alternating with Dr. A. C. Croftan of Chicago. Dr. Gerstenberger will also be the principal speaker for the Tenth Councilor District annual meeting in Chillicothe in September.

An effort will be made by the Medical Education Committee to cover as completely as possible all sections of the state. As in the past, from ten to fifteen meetings will be held in various centers of population, either in connection with annual meetings of district societies or other group meetings arranged for this purpose. It is likely that several of the meetings will be held in the same places as those of last year. It will be remembered that successful meetings were held in 1919 in Athens, Bellefontaine, Bucyrus, Canton, Cedar Point, Chillicothe, Dayton, Lima, Marysville, Portsmouth, Youngstown and Zanesville, with Dr. H. N. Cole, instructor in dermatology and syphilis at Western Reserve University, as lecturer.

Those physicians interested in arranging for group meetings, and in securing Dr. Gerstenberger as lecturer, should communicate at once with Executive Secretary Martin at the Columbus office of the Association. Time and place of meeting as well as suggested dates should be given. Confirmation of such dates or alternative dates will be made to suit the convenience of Dr. Gerstenberger.

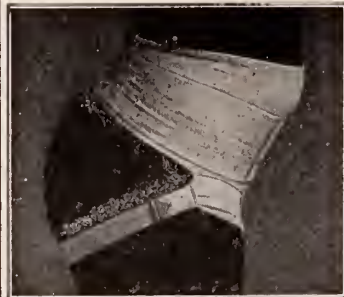
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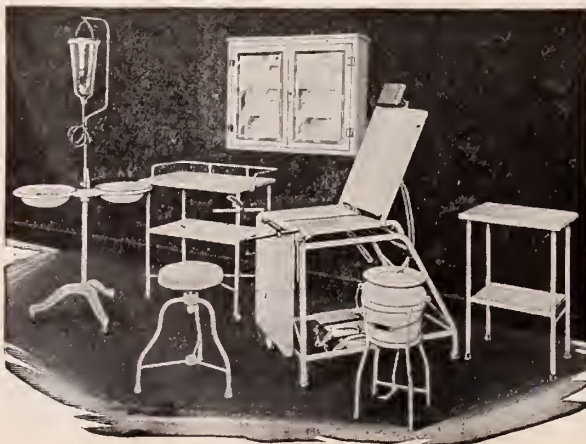
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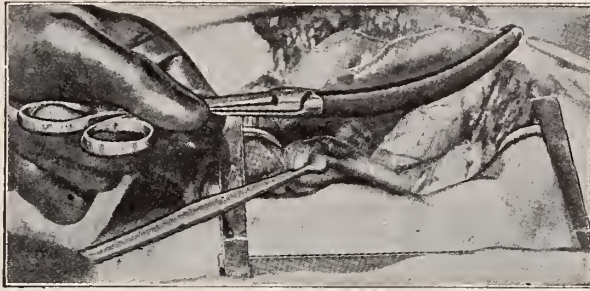
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## DEATHS IN OHIO

*Irving S. Bretz, M. D.*, Cleveland College of Physicians and Surgeons, 1897; aged 49; member of the Ohio State Medical Association; died at his home in Cleveland, June 25, of heart disease. Dr. Bretz was a practitioner in Cleveland for 24 years. He leaves a widow and one daughter.

*Bernie Coleman, M. D.*, New York University Medical College, 1863; aged 81, died at his home in Homer, July 1, from cancer. He leaves his widow and one brother.

*William H. Falls, M. D.*, Miami Medical College, Cincinnati, 1873; aged 70; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Cleveland, June 6. Dr. Falls was a native of Cincinnati and practiced medicine there for 35 years before his retirement and removal to Cleveland in 1912.

*Edward Henry Jewitt, M. D.*, Cleveland University of Medicine and Surgery, 1878; aged 69; died at his home in Cleveland, July 7, after an illness of three days. Dr. Jewitt practiced in Cleveland continuously since graduation and for 20 years was a lecturer in his alma mater. He is survived by his wife and five children.

*Delbert J. Miller, M. D.*, University of Michigan Medical School, Ann Arbor, 1888; aged 57; former member of the Ohio State Medical Association; died at the home of his brother near North Benton, June 29, from a self-inflicted bullet wound. Dr. Miller made his home in Alliance but he had previously practiced at North Benton.

*Harold James Morgan, M. D.*, Columbia University College of Physicians and Surgeons, New York, 1895; aged 47; member of the Ohio State Medical Association and Fellow of the American Medical Association; died in Cleveland, June 7. Dr. Morgan was a resident of Toledo, having moved to that city from Ogdensburg, New York, ten years ago. He was professor of pediatrics at Toledo Medical College, and for the past seven years was director of the children's department of Toledo Maternity Hospital. Last year Dr. Morgan was secretary of the Section on Obstetrics and Pediatrics of the State Association but was prevented by illness from participating in the transactions of the section at the Toledo meeting. Entering the Army shortly after the outbreak of the war, Dr. Morgan served with the rank of captain at Fort Oglethorpe, receiving his discharge December 24, 1919. His wife and two children survive.

*J. H. Neese, M. D.*, Starling Medical College, Columbus, 1892; aged 64; died at his home in

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Tremont City, June 15, of paralysis. Dr. Neese was Clark County pension examiner at the time of his death. He leaves a widow and one son.

*E. C. Oglesbee, M. D.*, Hahnemann Medical College and Hospital of Chicago, 1885; aged 62; member of the Ohio State Medical Association; died in Mt. Carmel Hospital, Columbus, June 30, following an operation which he had undergone a week prior. Dr. Oglesbee's home was in Cedarville, Green County, where he had practiced for 34 years. Surviving are his wife and two daughters.

*Louis F. Preston, M. D.*, Medical College of Ohio, Cincinnati, 1881; aged 63; died in Dayton, June 14. He formerly practiced at Ripley.

*Walter W. Wetmore, M. D.*, College of Physicians and Surgeons, Homeopathic, Buffalo, 1882; aged 67; died of apoplexy at the home of a friend in Conneaut, June 14. Dr. Wetmore had practiced in Conneaut for 32 years and has served a number of terms as city health commissioner, an office which he held at the time of his death. He leaves his wife and one brother.

*Thomas F. Wurtsbaugh, M. D.*, Eclectic Medical College, Cincinnati, 1886; aged 75; died at his home in Richwood, June 19. Dr. Wurtsbaugh served during the Civil War as a member of Company C, 174th Regiment. He was a resident of Richwood for more than 30 years. Surviving are his widow and one son, Dr. Firman M. Wurtsbaugh of Richwood.

#### Death of Major General Gorgas

Major General William C. Gorgas, former surgeon general of the United States Army, famous throughout the world because of his work in fighting the malarial mosquito in the Panama Canal zone, which accomplishment helped make the great engineering feat a reality, died in London, July 3. Major General Gorgas was 66 years old.

General Gorgas was in London preparatory to a mission to West Africa in behalf of the British government to investigate sanitary conditions, but suffered a stroke of apoplexy and was sent to a hospital for treatment, where he died.

In addition to the work done in Panama, the general dislodged yellow fever from its century-old stronghold in Havana and under the direction of the United States government and the Rockefeller Foundation supervised the campaigns against that dread disease in Central America, Peru and Ecuador.

In the last ten years his services were sought to give battle to plagues in many parts of the world. When the typhus epidemic began in Serbia in the war, an effort was made to have him undertake the campaign against it, but at that time he was needed to direct the medical and surgical work for the American army in France.

Soon after the United States entered the World War General Gorgas announced the organ-

ization of the extensive system devised for the "reconstruction" of soldiers crippled in the war which included the establishment of orthopedic hospitals in the great centers of America and the retraining of crippled men and preparation for resuming their vocations or learning new ones.

General Gorgas was born in Mobile, Alabama, October 3, 1854, the son of a Confederate general. He was graduated from the University of the South in 1875, and appointed a surgeon in the United States Army in 1880. He became surgeon general in 1914 and retired in 1918, after reaching the age limit for active Army service.

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## COUNTY SOCIETY REPORTS

### SECOND DISTRICT

*Darke County* Medical Society, in regular monthly session at St. Clair Hospital, Greenville, July 8, had as its guests Dr. F. C. Wagenhals of Columbus, and Dr. J. F. Beachler of Piqua. The former presented an excellent paper on "The Sympathetic Nervous System and Its Relation to General Medicine," and the latter presented the subject "Diagnosis and Treatment of Surgical Conditions of the Gall Bladder." A resolution was passed indorsing the \$200,000 hospital project being pushed by the American Legion as a memorial for Darke County. The meeting was spirited and very interesting, about 30 being in attendance.—B. F. Metcalfe, Correspondent.

*Montgomery County* Medical Society held its annual election of officers on June 18. Dr. A. F. Shepherd was chosen president; Dr. A. B. Brower, vice-president; Dr. Robert C. Austin, secretary; Dr. F. D. Crowl, treasurer; Dr. E. M. Huston, delegate to state convention; Dr. A. L. Light, alternate; Dr. Webster Smith, chairman of legislative committee.—G. G. Giffin, Secretary.

*Shelby and Miami County* Medical Societies met in joint session at Troy on June 24. The program consisted of a symposium on tuberculosis presented by Dayton physicians. Dr. Warren Breidenbach spoke on "Sanitarium Management of the Treatment of Tuberculosis"; Dr. Harry Burnett on "Roentgenology of Tuberculosis"; Dr. Robert Austin on "Diagnosis and Treatment of Tubercular Bone Lesions," and Dr. F. C. Payne on "Complement Fixation of Tuberculosis." Luncheon was served at the Troy Hotel.

### THIRD DISTRICT

*Allen County* Medical Society held its regular bi-monthly meeting at the Lima State Hospital, June 15. Dr. Allen Knisely was the essayist of the evening. Dr. Clark, superintendent of the hospital, then followed with a clinic, presenting a number of patients representing the different forms and degrees of insanity. The meetings held at the State Hospital are always very interesting and much appreciated by the society. Attendance 75.—A. S. Rudy, Correspondent.

### FOURTH DISTRICT

*Sandusky County* Medical Society members met at the DeMar Club, June 23, as the guests of Dr. E. M. Ickes of Fremont. Dr. J. J. Kurlander of Cleveland, read an interesting paper on "Tuberculosis of the Knee," which was thoroughly discussed by those present. There was a large attendance and following the scientific program the afternoon was spent in shooting, fishing and other sports, concluded at 6 o'clock with a

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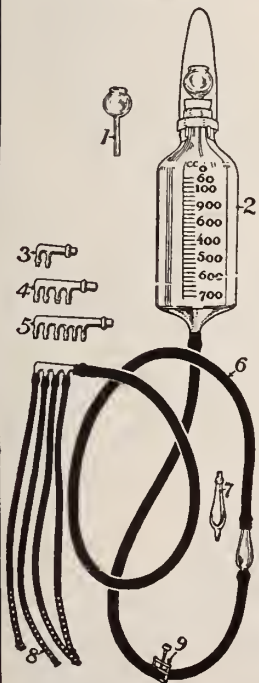
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splendid supper. The society expects to hold a joint meeting with the Erie County Society at Cedar Point in the near future.

#### SEVENTH DISTRICT

*Columbiana County Medical Society* had a most enthusiastic meeting at Wellsville, July 13. Dr. C. A. Hamann of Cleveland, delivered an exceptionally fine address on "Intestinal Obstruction." The members were delighted with Dr. Hamann's presentation and the meeting proved to be the most helpful *Columbiana County Society* has had for some time.—J. M. King, Secretary.

#### EIGHTH DISTRICT

*Morgan County Medical Society* had an interesting session, June 15, at the Malta Hotel. Following a six o'clock dinner, Dr. W. A. Melick of Zanesville, read a paper on "The Accidents Resulting from Child Birth as Seen by a Surgeon; Diagnosis and Treatment," and Dr. James Ball Naylor, health commissioner, discussed the new health laws.—C. E. Northrup, Secretary.

*Muskingum County Medical Society's* meeting held in Zanesville on June 2, was very successful, both in program and attendance, there being 28 members present. Dr. Louis Mark of McConnellsville, spoke on "The Treatment of Pulmonary Tuberculosis," and demonstrated artificial pneumothorax. The meeting of July 7, was addressed by Luther Howell of Columbus, on "Some Essentials Conductive to Normal Development of the Infant." A joint meeting of the *Muskingum County Society* with the *Fairfield and Licking County Societies* at Buckeye Lake is being planned for August.—Maurice Loebell, Secretary.

#### NINTH DISTRICT

*Scioto County Medical Society* held its regular monthly meeting at the Wheelersburg High School, July 12. After a short business meeting the doctors and their wives and daughters adjourned to the dining-room to enjoy an excellent chicken luncheon. Following the luncheon Dr. R. R. DuCasse of Cincinnati, read an interesting paper on "Hypertrichosis and Its Treatment by the Application of Radium." This paper was the result of some interesting original work done by Dr. DuCasse along this line.

The second paper, by Dr. Tunis Nunemaker, on "The Determination of the Fault in the Infant's Diet," was very timely and interesting and showed much time and study given to this subject by the essayist.—Harry Rapp, Secretary.

#### GOVERNMENT TREATMENT

The War Risk Insurance Bureau and the United States Public Health Service urge that all former service men who are suffering from acute tuberculosis enter hospitals. There are about 40,000 of these men in the country, but only 4,500 are in hospitals under government care. The government is now using 340 sanitariums and has contracts for 40 more.

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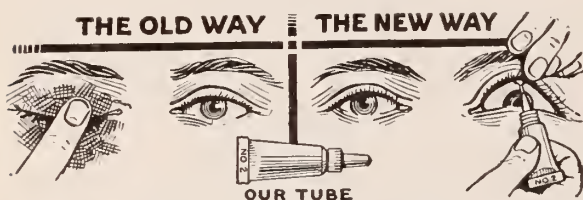
## Health Demonstration in a Rural Health District Planned by State Department of Health

How to develop a complete yet inexpensive health service for rural health districts is the problem now facing officials of the State Department of Health. Until the Hughes-Griswold law was passed no such service was possible. The provisions of this law furnish the necessary machinery, but it is just as impossible to provide for an effective health service by legislation as it is to improve the morals of a people by the same process. During the past six months more has been done to improve health conditions in the rural districts of Ohio than during the entire previous history of the state, but the ideal health service in a rural health unit has yet to be developed.

It is the plan of the State Department of Health in co-operation with the medical profession and with the assistance of the Red Cross and other similar organizations, to select a rural health district for purposes of experiment. The health organization of the county so selected will be supplemented and its activities directed for the purpose of demonstrating the meaning and results of an adequate and effective health service. A similar experiment was conducted by the National Association for the Prevention of

Tuberculosis in Framingham, Massachusetts, a city with a population of 16,000. This experiment has been closely observed by sanitarians throughout the country, and the city of Framingham has become famous because of this experiment from one end of the country to another. It is probable that the Ohio county selected for the demonstration will become equally famous, and the resulting publicity will be of such a wholesome character as to benefit not only the district but also inspire surrounding counties to improve their health service.

The plan centers around the health center or health service station as it should be called. This is a building housing the health department and other welfare and social agencies. Clinics of all kinds are held here, tuberculosis, venereal, orthopedic, pediatric, eye, ear, nose and throat and general medical. Medical services are restricted to those people to whom such services would not be otherwise available. The clinics are not meant to take the place of the general practitioner or specialist, but to supplement their work by making such services available to the poor and to others who do not avail themselves of medical attention. There will be a campaign of life exten-



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sion, seeking to educate the public to the value of periodic physical examinations as a means of avoiding disease and prolonging life. Lectures will be given at the health service station and these will be illustrated and supplemented by posters, pamphlets, lantern slides and moving pictures. From the central station workers and professional teams will be sent out to various strategic points throughout the county. Centralized school buildings will be selected for these posts whenever possible. The cooperation of the teaching profession and the various boards of education will be enlisted.

The specific aims of the demonstration are:

1. To provide for the immediate control of communicable diseases, particularly typhoid fever and diphtheria.
2. To cause a reduction in infant morbidity and mortality.
3. To reduce the prevalence of venereal diseases and to provide for the treatment of all venereal cases.
4. To detect and cause the removal of physical defects of school children.
5. To ascertain the best and most economical plan for a real health service in a rural district.

Physicians and public health nurses will comprise the staff for the demonstration. Lay deputies and sanitary police will not be used as the modern trend of opinion is that the work performed by these persons can be done more effectively and with much less friction by persons familiar with public health work.

Officials of the State Department of Health have not selected the county in which the demonstration is to be carried on. The comparative advantages of several counties are being carefully weighed. The county to be selected must conform to the following requirements:

1. It must be a rural county, with no city of over 10,000 population and smaller if possible.
2. The roads must be passable in winter and spring so that the work will not be subject to seasonal interruptions.
3. The cooperation of the medical profession, the health department, the local chapter of the Red Cross, and of all other official and voluntary agencies must be assured.
4. The county must reciprocate in the work. It is planned to have the demonstration managed as a local affair as much as possible, and to have the work continued entirely under local auspices after outside assistance has been given for a reasonable time.
5. The county should not be located too far from Columbus, to minimize the expense of travel.

While it is the intention of the State Department of Health to select the county for the reasons stated above, it is probable that the county giving the greatest promise of cooperation will be chosen. Any rural county desiring to be

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known as the one which pays most attention to the health of its residents and as possessing the most efficient health service should get in touch with the State Department of Health. It is probable that the choice will be made within a few weeks. The success or failure of the demonstration will depend upon the local medical profession, and this fact augurs well for the experiment, as the physicians of Ohio are thoroughly imbued with the ideals of preventive medicine and have done a great deal to bring the health organization of the state to its present high standing.

#### New Director of Public Health Nursing

Announcement has been made that Mrs. Louis Selbert has been appointed assistant professor in the Department of Health and Sanitation, College of Medicine, Ohio State University. She is to direct the courses in public health nursing and to advise the women who are enrolled in the Science Nursing Course offered by the University.

Mrs. Selbert was born in Cincinnati, the daughter of the late Dr. Louis W. Sauer, professor in the Cincinnati College of Pharmacy. She was graduated from Christ Hospital in that city; is a post-graduate from the Massachusetts Eye and Ear Infirmary, Boston, and has had special training at Teachers' College, Columbia University, and holds a certificate of honor from the University of the State of New York. She was formerly supervisor of instruction for nurses at Cincinnati General Hospital and comes to Ohio State University from the University of Missouri, where she was assistant professor of Nursing in the University Extension Service.

Ohio State University has arranged an eight months' course and a four months' course in the theory and practice of nursing, open to qualified graduate nurses, or social workers registered in the university. Clinical observation and field work will be conducted through organized public health and social service agencies in Columbus and rural nursing experience will be arranged for. Under the state's new health administration system there is great demand for graduate nurses with public health training and Mrs. Selbert will welcome inquiries from those interested in this work.

#### Centennial Celebration

Sir Auckland Geddes, ambassador to the United States from Great Britain, is to be the principal speaker at the one hundredth anniversary of the founding of the Medical College of the University of Cincinnati, November 4. Members of the board of directors of the University and the faculty of the medical college are arranging the celebration exercises, which will be attended by men and women of national note.

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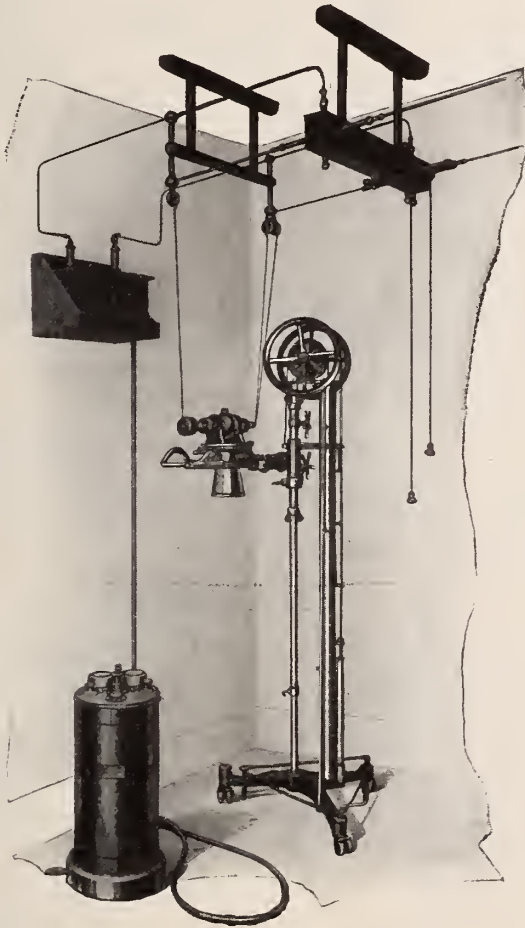


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## NEWS NOTES OF OHIO

*Columbus*—Dr. Thomas H. Haines, professor of mental and nervous diseases, Ohio State University, has returned from Jackson, Mississippi, where he has been stationed while conducting surveys in a number of southern states, under the auspices of state commissions and the National Committee for Mental Hygiene.

*West Mansfield*—Dr. E. L. Louthan, a resident of this village, has moved to Rogers, Columbiana County.

*Hillsboro*—Dr. J. C. Bohl is a candidate for the office of coroner of Highland County, subject to the August primaries.

*Youngstown*—Dr. M. Henry Speck, of this city, a recent graduate of Jefferson Medical College, has been appointed resident physician in Guy's Hospital, London, England, where he will specialize in diseases of the eye, ear, nose and throat. Dr. J. C. Speck, a brother is engaged in similar work at St. Bartholomew's Hospital, London.

*Massillon*—Dr. Seth Hattery was severely bruised and cut when he was struck by an automobile in June.

*Cleveland*—Dr. Michael P. Motto has been appointed assistant director of a post graduate course in ophthalmology at New York Post-graduate Hospital for a period of four months, which began July 6.

*Cambridge*—Dr. W. M. Lawyer is convalescing from an operation which he underwent in Chicago recently.

*Marion*—At the closing session of the annual state G. A. R. convention in Uhrichsville, June 17, Dr. G. T. Harding was elected surgeon general.

*Youngstown*—Dr. T. J. Arundel has been awarded the gold cross "Pro Ecclesia et Pontifice" in recognition of his services in Italy during the World War.

*Marion*—Dr. L. L. Roebuck has moved here from Richwood, Union County, where he has been practicing for a number of years.

*South Charleston*—Dr. J. Warren Little, a native of this village, died, June 5, in his hospital at Minneapolis.

*Wilmington*—Dr. Kelley Hale has returned from an extended trip to hospitals and sanitariums in the Middle West.

*Sardinia*—Dr. J. O. Stout, who moved to this village from Ashville in March, has located in Richwood.

*Cincinnati*—Dr. Ashton B. Heyl sustained a fractured hip, July 2, when his automobile skidded and struck a pole.

A SCIENTIFIC staff, composed of physicians and physiological, biological, pharmaceutical and analytical chemists, has been created by these laboratories. Each man is a specialist in his own particular field and many of them are scientists of distinction. We believe that the personnel of this staff is unexcelled by that of any manufacturing pharmaceutical house.

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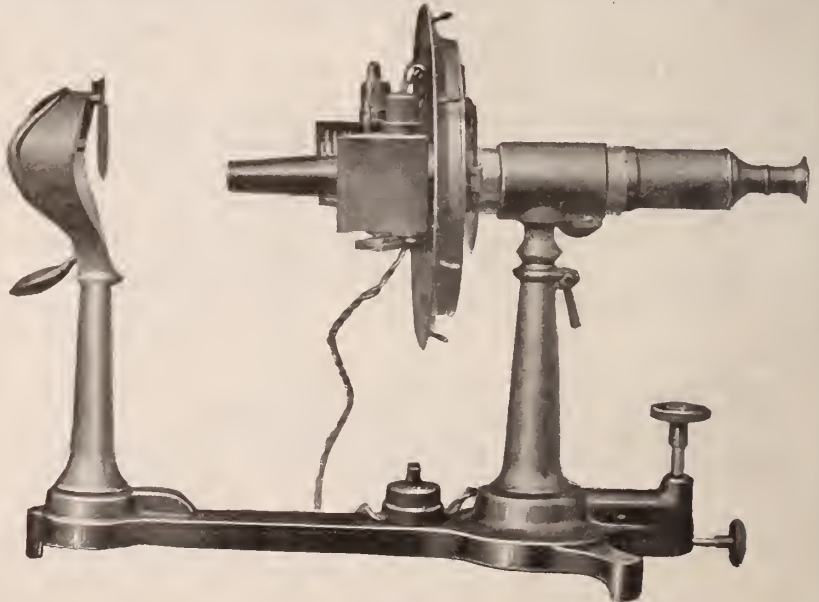
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Dayton, Ohio



# Ohio State Medical Journal

Published monthly by

THE OHIO STATE MEDICAL ASSOCIATION  
131 East State Street, Columbus, Ohio

Telephones: Ohio State 4905; Bell Main 5259

This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.

Issued under the direction of the Publication Committee.

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## EDITORIAL COMMENT

by D. K. M.

### Political Maneuvering

As a sequel to the expose of the newest activities of the chiropractors, whose chief legislative lobbyist sent out communications just before the primaries supporting a "slate" for state officers and legislative representatives, it will be remembered, that the legislative bribery investigating committee brought out the facts that several politicians received large fees from the chiropractors to appear before committees of the general assembly last session in behalf of the chiropractic or non-medical bill.

Russel H. Skeels, head of the chiropractic lobby, was the author of recent communications on state candidates, and of whom the legislative investigating committee said "his conduct as lobbyist as disclosed by the testimony is not sufficiently convincing and clear to the extent of satisfying the committee that he was wholly without fault in connection with the Delehanty case." Delehanty was indicted as a result of the bribery scandal.

In view of the nomination by each of the two political parties of candidates who were opposed by the chiropractors, it may properly be said that such opposition was a genuine compliment and that it contributed to the success of these nominees. The Cincinnati Enquirer in its political review written by James E. Faulkner, just prior to the primaries on August 10, sketched the following vivid picture of chiropractic machinations:

"Brass music, with cymbal accompaniment, was caused by the turning up this week of a letter from a lobbyist, one Russell H. Skeels, of Delaware, who manipulates legislation for the limited medical practitioners known as chiropractors, giving out advice as to the nomination of candidates. 'Doc' told the 'Chiros' what to do all down the line, but placed stress upon the defeat of Senator Howell Wright, of Cleveland, for the Democratic nomination for the Lieutenant Governorship, and also upon the turndown of the incumbent, Clarence J. Brown, at the Republican primary election. Wright is the legislator who, when approached with a bribe on a chiropractic bill, made the fact public. Brown, as Lieutenant Governor, objected to lobbying for the bill, and threatened denunciation from the chair. In his letter Skeels cautioned the half-way doctors to say that they were acting in the interest of 'good morals and good government.' Very fine! But it's a startling state of things. However, it's constitutional, and anybody who desires to follow the 'Doc's' advice can do so."

Judging by the most recent activity of Skeels and by the activities of the chiropractors in already preparing a bill similar to that introduced at the last session, for introduction in the next session of the General Assembly, indicates that

efforts will be made to again employ political influence.

Those who are best informed on public health problems cannot understand why politicians and some members of the legislature are willing to enact special laws granting favors to chiropractors and other cultists who attempt to treat human ailments without possessing educational qualifications which are at all comparable with those physicians are required to possess. To thus fix lower educational qualifications for cult practitioners is not only discrimination against physicians, but a more serious injustice to the public which has a right to expect that only those competent to treat human ailments will be legally permitted to do so. Whatever good there may be in any cult method of treatment, will in no way be decreased if the practitioner is required to have a sufficiently thorough training to enable him to recognize the disorders he may attempt to treat.

It may be natural, but it is extremely hazardous for the public to permit its representatives to enact destructive laws tending to weaken health administration, to emasculate sickness preventive measures, and promote rampant cultism, the latter of which in most cases is a commercialized exploitation of the sick public through ignorant and unqualified practitioners.

It is time that the public, and particularly the public's representatives in elective offices, began to appreciate the fundamental importance of high standards and strict requirements, and to encourage scientific advances. They should and must refrain from enacting legislation which in the end cannot do otherwise than be detrimental to public welfare and public health.

#### Physical Education

It is hoped that from the crucible seething with unrest and dissension will come a new era.

If there is to be a birth of a new civilization, a basic purpose will be the conservation of the health of the individual.

The health of the nation will determine its part in the world's history, circumscribe its ability and limit its field of activity.

A ray of light and hope is found in the avowed purpose of various organizations for the promotion of physical development in the younger generation, coincident with a uniformity in health and physical instruction in the public schools.

A special committee of the Ohio State Medical Association, authorized by resolution at the last annual meeting, is at present devoting its thought to these matters. The State Department of Public Instruction has indicated its constructive interest, and has requested the school superintendents of Ohio to plan a program of instruction in practical hygiene, outlined by the Bureau of Child Hygiene of the State Department of Health.

Some suggestions which have already been

made for a uniform plan are reproduced on page 692. The committee of the Ohio State Medical Association welcomes suggestions from the membership. Dr. E. O. Smith of Cincinnati, former president, is chairman of the committee. The other members are Drs. P. B. Brockway, Toledo; A. G. Helmick, Columbus; J. O. Howells, Bridgeport, and G. E. Robbins, Chillicothe. The Executive Secretary of the State Association is the committee's secretary.

#### "The Great Error" How Strong?

The strength of Christian Science in America may prove as great a conundrum as the age long mystery "how old is Ann?" True, the few who profess a belief in this theory are very noisy and active. But that the association is numerically strong is ridiculous to presume. Activities of the followers of Mrs. Eddy remind us of the story of the man who made a bargain for the sale of a million frogs. Finally he proffered only ten frogs. When asked why he did not deliver the remainder he remarked "ten is all I have." "But," said the purchaser, "you told me you had a million." To this the frog owner replied: "I judged so because of the noise they made."

Regarding the strength of the Christian Science Church in America the following is of interest: The Census' Bureau report on religious bodies in the United States is dated 1916, but was published in 1919. The letter of transmittal from Sam L. Rogers, Director of Census, to William C. Redfield, Secretary of Commerce, is dated February 28, 1919.

On page 14, it says: "the total number of denominations listed in this report is 202. The Church of Christ (Scientists) refused to furnish any statistics and, although a few individual organizations responded, it was decided to omit the body from the list of denominations."

The head of one of the great Protestant churches of Illinois recently called our attention to these facts: That Chicago is at present the stronghold of the Christian Science Church; That in Chicago the organization has 16 churches or meeting places; that not one of the meeting places will seat a thousand persons; That most of them will not accommodate over 200. Allowing 1,000 for each unit mentioned, a number which we believe is very liberal, one can readily figure out the strength of the cult in Chicago or, for that matter, in Illinois.

We might add that some time since Christian Science in America passed the Zenith. Today "The Great Error" is numerically tobogganing downward very rapidly.

However, the Eddyites make up in activity what they lack in number. They maintain the most efficient and best-oiled political lobby to be found anywhere. Their representatives attend every session of the state legislature and scrutinize



every syllable of proposed legislation offered; and should any lurking danger of Eddyism be suspected, the members of the legislature are bombarded by mail, telegraph and in person until the average politician is convinced that the volume of frog blast reaching him could issue from no fewer than one million throats.

No small part of the Christian Science political strategy lies in concealing their real numerical strength. In reality, more voters are confined within the walls of the state insane hospital than attend the insane orgies of this misnamed cult.

How long will the sane and wholesome public of Illinois permit this million-frog noise to dictate all medical laws?—*Illinois Medical Journal*.

### H. I. Propaganda Still Alive

The medical profession must not get the idea that its unanimous condemnation of compulsory state health insurance embodied in a resolution adopted at the last annual meeting of the American Medical Association in New Orleans, puts an end to the subject and that it no longer requires attention.

Substitutes and modifications even worse than the original draft of a so-called "model law" proposed by the American Association for Labor legislation are being proposed in a number of states. In several others bills equally visionary and some more vicious have already been introduced. So far, none have been passed in this country.

It was generally recognized when the compulsory health insurance bill was introduced in the Ohio legislature last session that it was more favorable to the medical profession than any introduced up to that time elsewhere.

Undoubtedly a similar proposal will become a vital issue in the next session and in view of the expressed opposition of the Ohio profession it is almost certain that the new proposal will be no more friendly than that previously introduced here for propaganda purposes.

One of the latest moves on the part of the American Association for Labor Legislation is an attempt to interest the ministry in their paternalistic propaganda. Dr. Eden V. Delphuey of New York, writes that he has been extremely busy in endeavoring to keep the Federated Council of Churches of Christ in America from going over, "hook, line and sinker," to the side of "social insurance," alias compulsory health insurance.

Referring to the new phase of this propaganda the *Illinois Medical Journal* in its last issue stated:

"From several sources our attention has been called to the personnel of the propagandists in this country of health insurance and allied schemes. One phase of this subject we consider alarming. It is this: that several of the staunchest advocates of these dangerous doctrines are Russians inoculated with the soviet government

bug. Likewise a number of them have deemed it wise or expedient to shorten materially or even change the spelling of their names. It has also been reported that one of them was connected with the notorious 'Rand School' (New York) which was raided by the federal government some time ago as being in league with the anarchists, bolshevists, etc. It seems to us that it is about time for real Americans to wake up, get busy and help guard American institutions."

### "Addiline" Exposed

The National Vigilance Committee of the Associated Advertising Clubs of the World has issued a special bulletin, the first in the field of medical advertising, dealing with "Addiline," a medicine extensively advertised as a tuberculosis remedy and sold by a company with headquarters in Columbus. The report attacks Addiline as "worthless as a tuberculosis remedy." Its newspaper advertising is branded as being of the kind "that preys upon suffering men and women," and is attracting wide-spread attention from those in the field of public health.

"The advertising of the Addiline Company, which is situated in Columbus, O., would lead the undiscerning reader to believe that this preparation will cure tuberculosis," says the special bulletin, "although it cleverly avoids making a direct assertion.

"It is to the ignorant and poor sufferers, distrustful of doctors, that the Addiline advertising naturally appeals," continues the Vigilance report. "Demonstration has proved that any treatment will have a strong suggestive action at first, and the clever advertisers have taken advantage of this.

"They agree to refund the \$5.50 charged for the first four weeks' supply, if returned within six weeks of the shipment date, providing the patient has used it for twenty-eight consecutive days without benefit." The bulletin points out that most of the 'victims,' influenced by the suggestive force, will believe that they have been benefited when the trial period is so short.

"The simple fresh-air and rest rules, prescribed by reputable physicians as the only 'remedy' yet discovered for the white plague, are attached to the bottles of Addiline, which attempts to steal the credit for their beneficial action," the report announces.

"Analysis of Addiline by chemists shows that it contains kerosene, turpentine and a little aromatic oil, and that: 'It would make a better furniture polish than tuberculosis remedy.' The mixture sold for \$5.50 would cost about thirty-five cents at a drug store, and the Ohio State Department of Health reports that not only does the mixture contain nothing helpful for tuberculosis, but it is exceedingly dangerous for internal use.

"The advertising for Addiline says that it will 'kill germs'; though this may be true, it must come in contact with the germ," says the bulletin, "and this is impossible when the germ is in the lung and the remedy goes into the stomach.

"Advertising of this character is confidence-destroying in the extreme," concludes the Vigilance Committee's report.

### New Recruits

Many funny capers are being cut by officers and members of sectarian and cult groups in an effort to secure new recruits for their particular schools of practice.

Various methods in propaganda have been resorted to in an effort to enroll "students" for the various schools devoted to a perpetuation of special theories. One favorite method is to circularize high school students and prospective graduates. Teachers in the schools have also become an instrument in such propaganda.

The future of medical science must not be jeopardized through the allurements of short terms of schooling and easy money. The very advance of civilization depends upon the safety of the state and upon the health of its people. The advances which have been made in science by members of the medical profession in the past should not be permitted to lag, but must be carried forward.

The fall term in the various medical colleges will open within the next few weeks. Some of the better schools already have full enrollment for their freshman courses. The quota in others is being rapidly filled. However, as we have been so frequently told, there is a serious danger of a shortage of physicians and encouragement should be given to properly qualified young men of training and character to enter the field of scientific study looking toward humanitarian services as physicians and surgeons.

A few kind words of advice may contribute to the protection and care of the next generation in the prevention and treatment of disease.

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It may be stated as a fair proposition that if those who desire to practice the art of healing are not willing to comply with such reasonable educational standards as will render the public safe from ignorance and incompetence then they should not be granted legal authority to practice; nor should they be permitted to practice on the public illegally through the machinery that they themselves have established to evade the penalty for so doing.

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## Some Surgical Phases of the Cancer Problem\*

Frank Warner, M. D., Columbus

**Editor's Note.**—Cancer is the most fatal disease of adult life. Of those who reach the age of 40 years, one person in eleven dies of cancer. Cancer is neither an hereditary, contagious nor transmissible disease. At the outset it is a purely local condition easily cured by radical operation. As so large a proportion of cancer cases reach the surgeon only when terminal symptoms are present, we must, according to Dr. Warner, look to a much earlier diagnosis of the disease, rather than to any improvement in operative technique, if this gruesome mortality is to be reduced. Slight alterations in menstrual flow or unusual discharges in women over forty years of age should be carefully investigated as suspicious signs of cancer. Women of this age should be encouraged to seek frequent examination as 60 per cent of uterine cancers are inoperable at the time the surgeon is consulted and many of the remaining 40 per cent are seen too late to effect a permanent cure. Cancer of the stomach, the most frequent form of malignant disease, must be diagnosed in its incipient stage or prevented by the surgical treatment of ulcer of the stomach. In operating care must be exercised not to spread cancer cells onto raw surfaces where they readily grow. Heat, X-ray and radium are properly reserved for inoperable cases.

**C**ANCER causes 80,000 deaths in the United States each year, the fact may well claim the attention of the medical profession's best efforts to lessen this tremendous mortality. Even the intensive study that has been made into the cause or causes of the disease and the efforts of organized bodies and individual physicians and surgeons to induce the public to have suspiciously malignant conditions investigated earlier, the mortality from the disease has not been lessened. *Indeed, statistics would seem to indicate that cancer is on the increase in the United States.* This increase may be apparent and not real, but it will take a very careful revision of statistics from time to time to prove that cancer is not on the increase. Some of the highest statistical authorities have divided on this question. At best, the cancer death rate the world over is appalling.

### DEATH RATE FIGURES

*Cancer is the most fatal disease of adult life. Taking in all periods of life tuberculosis produces twice as many deaths, but the principal incidence of tuberculosis is in the earlier years of life.*

*Of those who reach the age of forty years, one person in every eleven dies of cancer; one man in fourteen and one woman in eight succumbs to the disease. This higher death rate in women is due principally to an involvement of the generative organs and breast.*

In an analysis of 23,660 cancer deaths in four years, from 1911 to 1914, in the industrial department of the Metropolitan Life Insurance Company, the death rate from the disease was 69.7 per hundred thousand persons in any given community per year. But this mortality varied greatly at different ages. At 25 to 34 years, the rate for all persons is 15.9 per hundred thousand persons. At 35 to 44 years, 77; 45 to 54 years, 198.8; 55 to 64, 381.9; 65 to 74 years, 603.1, and 75 years and over a death rate of

817.5 per 100,000 persons. This tells its own story—a story that cancer is producing fearful havoc among the human race.

Despite the fact that Hoffman produces statistics to show that cancer is greatly on the increase, not alone in this country but all over the world, Willson, of the Metropolitan, a statistician of equal merit and reputation, controverts this statement. While Willson's figures, on the face of them, seem to prove, as Hoffman's do, that cancer is on the increase, yet he feels that there are so many sources of possible error in these figures, impossible to correct; that, at least, the disease is not really increasing in frequency. We all know, also that, as he states, nothing is more misleading than statistics.

### FALSE NOTION ABOUT CANCER

Physicians clearly understand that cancer is not a contagious nor transmissible malady, although many of the laity believe the contrary. There is no foundation for the theory of cancer belts nor cancer villages. Doubtlessly much of this belief has arisen from the shifting of population in the various communities, many of the younger generation seeking their fortune in the cities, leaving the older people behind, in whom cancer is more likely to develop. Some of the New England villages, especially in Vermont and New Hampshire, had just such a shifting in the population, where so many of the younger people left their homes for new fields of endeavor in the west, which gave to both of these states a greatly increased death rate from cancer. An analysis of the statistics shows that while there is an increase in the number of cases based on percentage of population, the real number of cases has not increased.

Some buildings have developed the reputation of being cancer houses. When analyzed, it is found that these buildings have housed chiefly old people who have happened to be more unfortunate than some other persons.

In proof of these statements, it is well known that a cancer can be transplanted from one part

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

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817.5 per 100,000 persons. This tells its own story—a story that cancer is producing fearful havoc among the human race.

Despite the fact that Hoffman produces statistics to show that cancer is greatly on the increase, not alone in this country but all over the world, Willson, of the Metropolitan, a statistician of equal merit and reputation, controverts this statement. While Willson's figures, on the face of them, seem to prove, as Hoffman's do, that cancer is on the increase, yet he feels that there are so many sources of possible error in these figures, impossible to correct; that, at least, the disease is not really increasing in frequency. We all know, also that, as he states, nothing is more misleading than statistics.

### FALSE NOTION ABOUT CANCER

Physicians clearly understand that cancer is not a contagious nor transmissible malady, although many of the laity believe the contrary. There is no foundation for the theory of cancer belts nor cancer villages. Doubtlessly much of this belief has arisen from the shifting of population in the various communities, many of the younger generation seeking their fortune in the cities, leaving the older people behind, in whom cancer is more likely to develop. Some of the New England villages, especially in Vermont and New Hampshire, had just such a shifting in the population, where so many of the younger people left their homes for new fields of endeavor in the west, which gave to both of these states a greatly increased death rate from cancer. An analysis of the statistics shows that while there is an increase in the number of cases based on percentage of population, the real number of cases has not increased.

Some buildings have developed the reputation of being cancer houses. When analyzed, it is found that these buildings have housed chiefly old people who have happened to be more unfortunate than some other persons.

In proof of these statements, it is well known that a cancer can be transplanted from one part

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

to operation if they once understood more clearly these facts.

To wait for the appearance of the classical symptoms of cancer of the stomach before operating on the patient, is to wait, in the majority of cases until the operation can offer nothing beyond confirming the diagnosis and perhaps some temporary relief. Indeed, to wait until a positive diagnosis can be made by any of our laboratory or X-ray findings, associated with the signs and symptoms of the disease, places the patient, too often, out of the pale of successful operability. Until a delicate and reasonably certain test for the presence of cancer is discovered, on the order of the Wassermann test for syphilis, the surgeon must be content with a presumptive diagnosis of cancer of the stomach to attack the disease. If a cancer is not discovered at operation, pathology that needs correction will usually be found. If not, the operation, at last, has been nothing more than an exploratory incision largely devoid of danger.

Loss of weight, vomiting over considerable periods, either of the contents of the stomach or of blood, cachexia, the presence of a lump in the stomach, and pain, are terminal symptoms of no value to the surgeon for purposes of operation. To make a successful operation, the early symptoms of the disease must be sought for and the patient brought to operation in advance of a certain diagnosis. When the symptoms are such as to make a presumptive diagnosis highly probable, the operation should be made. The public should be educated to take some of these diagnostic chances of uncertainty along with the surgeon.

Stomach symptoms in a patient under 35 years of age will almost constantly point in the direction of other pathology than cancer. Indeed, in 90 per cent of the cases, according to Cabot, the cause of the stomach symptoms are outside of it and in only 10 per cent do the stomach symptoms have a pathological basis in the organ itself. It is of some benefit to the diagnostician to remember then, with stomach symptoms, at any age, only ten per cent of the cases will indicate trouble within the organ itself.

In a patient over thirty-five, and more especially over forty, early stomach symptoms must be carefully analyzed for they frequently point in the direction of cancer of the organ. When a patient at this period of life develops stomach symptoms that are of a rather constant nature, which are not promptly amenable to usual treatment, an operation is in order, for if an ulcer or cancer is not found in the stomach, very frequently the pathology will be found in the gall-bladder or appendix. If the patient has been having digestive trouble in the past it becomes more constant, if not more aggravated, after thirty-five, the presumption of cancer or ulcer of the stomach is sufficient to call for operation if other causes have been ruled out. In the younger

years of life, ulcer of the stomach may be treated medically; in the cancer age of the patient it is a constant menace to his life in the direction of carcinoma.

A careful X-ray examination will often show some abnormality in the motility of the stomach before the screen in early stages of cancer, but to wait for this method of diagnosis to show filling defects is to wait for another terminal symptom of the disease.

Finally, the surgeon cannot wait for a positive diagnosis of cancer of the stomach before operation to be of his greatest usefulness. He must depend upon a presumptive diagnosis until surer methods of early diagnosis are discovered. In operating in this way, he attacks the cancer, if found, at a period that promises a maximum of cures. If a cancer is not found, usually other pathology is discovered, perhaps outside the stomach, which fully justifies the undertaking of the operation.

#### GASTRIC ULCER IN RELATION TO CARCINOMA

As gastric cancer is the most frequent form of malignant disease, it is of importance to consider gastric ulcer in its relation to carcinoma as a pre-cancerous disease. There seems to be a wonderful diversity of opinion as to the exact position of gastric ulcer as fore-runner of cancer. If gastric ulcer is associated with cancer in 68 per cent of the carcinomas of that organ and if 71 per cent of the cancers have developed on gastric ulcers, as stated by the Mayo clinic, it becomes highly important to attack surgically all cases of ulcer of the stomach without regard to a possible malignancy at the time of the operation. On the other hand, if the transformation of gastric ulcers into carcinomas seldom occurs, so seldom as in 2 per cent of cases, Busch believes, then it would seem of small value to attempt the reduction of cancer mortality by performing gastro-enterostomies for the cure of the ulcers. Mayo's give the highest figures of the transformation of gastric ulcers into carcinoma, 68 per cent and Busch the lowest, 2 per cent. Between these figures different per cents are given by different writers.

By analogy ulcers in other situations, as the legs, and lupus seldom give rise to cancer transformations in them; even when they do, it is only after years before such a growth results and then very infrequently.

Ewing, in the *Annals of Surgery* for June, 1918, does not believe that ulcers terminate in cancer in more than five per cent of the cases. He offers a number of arguments for the support of his statement. *First*: "The seats of election of cancer and ulcer do not favor the frequent origin of one from the other. The commonest seat of ulcer is the lesser curvature (36.3 per cent), whereas only 12 per cent of cancers occur in this situation."



The usual seat of gastric cancer is the pylorus.

Against the belief that gastric cancer is so frequently engrafted upon an ulcer, Ewing states: "Half the gastric ulcers occur between the ages of twenty and thirty years, and nearly all before thirty-eight, while most cancers occur between fifty and sixty years. Yet the incidence is not always so uniform. It is possible that the transformation of ulcer into cancer is limited chiefly to subjects well advanced in years."

It must be confessed that many cases of cancer of the stomach appear without any previous history of ulcer so far as symptoms are available. It would seem that if cancer is so frequently engrafted upon a peptic ulcer, we should have a long history of previous disturbance of the stomach before the cancer made itself manifest.

Ewing observes further, that: "An important phase of the clinical evidence relates to the fate of ulcers long observed and treated, which shows that while ulcer is permanently cured by medical measures in only about 40 per cent of cases it very rarely develops into cancer while under observation. Geenough and Joslin followed for five years 114 cases of ulcer treated medicinally. Of these, forty-one recurred, 27 died, 4 from unknown causes, but only one from the subsequent development of cancer. Hemmeter observed only three cases of cancer developing in the course of 232 peptic ulcers.

"The results of gastro-enterostomy for ulcer reveal a small percentage of recurrences in the form of carcinoma. In 1,025 gastro-enterostomies for ulcer, treated for some time, Bamberg collected 22 cases developing cancer, 2.1 per cent. In 52 ulcers treated by resection, cancer developed in 1.9 per cent. Since the carcinoma usually developed within two years of the gastro-enterostomy, there is some reason to assume that some of the ulcers were originally cancerous. Gressot from an elaborate study of the literature concludes that ulcers become cancerous in 2.3 per cent of cases treated by gastro-enterostomy. Billeter observed the course of 116 cases of ulcer treated by gastro-enterostomy. Eighty-seven patients were well after four to twenty-six years and only one developed cancer. Von Eiselberg reports that of 269 cases of ulcer treated by gastro-enterostomy, 13 died from cancer (five per cent), while among 41 cases in which the ulcer was excised, two died from cancer (also 5 per cent.) Sherron saw no cases develop cancer among 200 gastro-enterostomies for ulcer."

Many of these variations of opinion are based not alone on clinical grounds, but also on anatomical grounds. Most pathologists argue that if the cancer proceeded from an ulcer, the epithelial infiltration should not be found in the dense connective tissue at the base of the ulcer, but along the edges of the ulcer in the ulcerating mucous

membrane. As a matter of fact, in the cases of cancer associated with an ulcer, the infiltration is quite uniformly in the base of the ulcer in the old, dense connective tissue. Then there is a divergence of opinion again of the Mayo interpretation and many others on the appearance of the edges of many ulcers which are still conceded by all to be in a non-cancerous stage. In many peptic ulcers, the edges are found on microscopical examination, to have a large amount of epithelial cells, of an atypical type, rolled up on the ulcerating mucous membrane. McCarthy's interpretation of this condition is that the ulcer is already in a pre-cancerous stage. It is taught at the Mayo clinic that there is great danger of this pre-cancerous condition assuming a real cancerous condition unless the ulcer is cured by a gastro-enterostomy. However, this pre-cancerous condition will not always develop into cancer—probably in only a small percentage of cases. Even if this proliferation of epithelium is looked upon as the initiation of cancer process the factors of cell control become active again here as in so-called pre-cancerous conditions of the breast, cervix uteri, et al. and these aberrant cells are brought back under normal control in apparently 19 times out of 20 in the opinion of some high type pathologists.

A gastro-enterostomy usually corrects the trouble irrespective of the question of the development of cancer upon these ulcers.

But aside from the development of cancer upon a gastric ulcer, we need to be constantly on our guard for the appearance of carcinoma of the stomach independently of a peptic ulcer, either having preceded it or being accompanied by it. In making a diagnosis of gastric cancer, it is not necessary, of course, for it to have been preceded by an ulcer and we would only be confused if we tried too assiduously to develop the history of a preceding ulcer of the stomach.

#### BASAL CELL EPITHELIOMA

It is a relief to turn from carcinoma of the stomach, always difficult to diagnose in its early stages, to one that is easy to determine its character and to radically cure it. I refer to the so-called hair matrix carcinoma, or sometimes called a basal cell epithelioma. These occur in 90 per cent of the cases upon the face and the most of these on the face occur on the upper lip or above. But if one is watchful in his examination, he will often be able to diagnose a carcinoma of this type long before it has reached any size or before it has shown any tendency to ulceration. When a slowly developing pimple appears upon the face and it shows raised edges of a pearly color, think of this form of cancer, for that is doubtlessly just what is at fault. Instead of a pimple, these growths may develop to the size of an orange. There is always a great tendency for them to ulcerate. They are inclined to infiltrate broadly but not deeply. In their early stages,

and even when they have been in existence for a long time, the growths can be removed with wonderful success. It is surprising in the face of their wonderful response to surgical treatment, that we find so many of these growths on the face without there having been any modern scientific effort made in the direction of their cure. Instead of these hair-matrix carcinomas appearing as a distinctive little growth, it may appear as a flat ulcer or even a depressed eating process. Early, all of these forms are very amenable to the knife.

#### CONCLUSION

I am satisfied that if all of us are a trifle more alert, we shall make earlier diagnoses of our cancer cases and, if we do, it is going to give the surgeon an opportunity to make a decided improvement in his cancer statistics. But to do this we must not wait to make a positive diagnosis based upon the classical signs and symptoms of the disease, for so frequently these are only terminal evidences of cancer, interpreted too late to operate with any reasonable show of curing the patient. To operate on a presumptive diagnosis of the disease will give the patient a real chance for a cure of his malady.

#### DISCUSSION

DR. DUDLEY W. PALMER, (Cincinnati): There are many things in Dr. Warner's paper that I should like to speak of and commend but I shall limit my remarks to one phase of the cancer problem. My attitude toward the general subject of the prevention of cancer and education of the public in regard to cancer is explained in an article published in the Journal of the Ohio State Medical Association in 1911, under the title of "Prophylactic Cancer Surgery; A Plea for a Campaign of Public Education."

It is a notorious fact that most doctors are poor psychologists and it has seemed to me that we are not calling to our aid, one of the greatest psychological helps in creating the proper frame of mind of the public toward cancer, in that we are not letting the public know of the cures of cancer which the surgeons are today bringing about. How many cases of diphtheria do you think the doctor would be able to inject any quantity of diphtheria antitoxin into, if the public did not know of a single recovery? And yet we are asking the public to come to us for radical and often disfiguring operations for cancer, when a vast majority of the people who are threatened with some form of cancer do not know of a single cure.

We, as doctors, encourage the idea that the patients themselves should not be told that they have been operated on for cancer, and often even a majority of the family do not know of this fact, much less their friends. If the public could but know of the number of their neighbors who have been successfully operated and cured of cancer conditions I feel sure that there would be

developed a greater attitude of hope toward the possibility of a cure of cancer and it would, in many instances lead to the patient coming to us at an early stage, instead of their adopting the attitude, "I did not come to you, doctor, for fear you would tell me it was cancer and if it is cancer, I don't want an operation." In fighting the present attitude of the public we are certainly omitting to bring to our aid one of the greatest of psychological factors, and that is the knowledge of successes. Certainly here too, "Success will breed Success."

#### New and Non-official Remedies

*Benzyl Benzoate*—Fritzsche.—A brand of benzyl benzoate (see New and Non-official Remedies, 1920, p. 49), complying with the N. N. R. standards. Fritzsche Brothers, Inc., New York.

*Benzyl Benzoate*—Merck.—A brand of benzyl benzoate (see New and Non-official Remedies, 1920, p. 49), complying with the N. N. R. standards. Merck & Co., New York.

*Benzyl Benzoate*—Organic Salt & Acid Co.—A brand of benzyl benzoate (see New and Non-official Remedies, 1920, p. 49), complying with the N. N. R. standards. Organic Salt & Acid Co., New York.

*Ampules Ven-Iron Cacodylate*.—Each ampule contains 0.03 Gm. ( $\frac{1}{2}$  grain) of ferric cacodylate (see New and Non-official Remedies, 1920, p. 44). Intra Products Co., Denver, Colo.

*Ampules Ven-Iron Cacodylate*.—Each ampule contains 0.03 Gm. ( $\frac{1}{2}$  grain) or ferric cacodylate (see New and Non-official Remedies, 1920, p. 44) in physiological solution of sodium chloride. Intra Products Co., Denver, Colo. (Jour. A. M. A., July 3, 1920, p. 35).

*Diphtheria Toxin—Antitoxin Mixture* (Gilliland).—Each cubic centimeter of diphtheria toxin-antitoxin mixture (see New and Non-official Remedies, 1920, p. 264) represents three lethal doses of toxin and approximately 3.2 units of antitoxin. Marketed in packages representing one immunizing treatment, and in packages containing ten treatments. Gilliland Laboratories, Inc., Ambler, Pa.

*Gonococcus Glycerol—Vaccine* (Lederle).—A suspension of killed gonococci in a vehicle of glycerol and physiological solution of sodium chloride. For a discussion of gonococcus vaccine, see New and Non-official Remedies, 1920, p. 283. Marketed in packages of fifteen vials containing progressive amounts of the vaccine (Jour. A. M. A., July 17, 1920, p. 177).

*Whole Ovary*—H. W. D.—The Ovarian gland of the cow, including the corpora lutea, freed from extraneous matter and dried in vacuo. For actions and uses, see general article on Ovary (New and Non-Official Remedies, 1920, p. 201). Whole Ovary—H. W. D. is sold in the form of 5 grain tablets only. Hynson, Westcott & Dunning, Baltimore.



## Pre-Cancerous Condition of the Skin

Edwin D. Tucker, M. D., Toledo

Editor's Note.—Specialists in diseases of the skin are becoming more and more convinced that keratosis is a condition due mainly to a lack of care and exposure to the sun and inclemencies of the weather. Hence it is found with greatest frequency among farmers. Keratosis is one of the dermatoses that is considered to be a pre-cancerous condition of the skin. As it is amenable to treatment this should not be neglected.

ONE is very apt to become confused when patients present themselves for examination with the face well studded with brownish or slightly raised plaques, a very common skin condition that is seen far more frequently in large farming communities than in industrial centers or cities.

### GENERAL CONSIDERATIONS

Over 70 per cent. of my cases occur in farmers or their wives, and I believe this is due to the fact that city dwellers take far better care of the skin. Men in town, especially, have every opportunity to patronize the large barber shops in which the care of the skin is promoted by the routine use of hot packs, as well as massage with soothing creams. They also have the benefit of the intelligent advice of friends and physicians about keeping a clean, smooth-shaven face and protecting it from the inclemencies of the weather. All these things aid greatly in reducing the incidence of keratotic conditions. Pride of appearance is a great factor in the prevention of keratoses.

Persons in rural life have not the same incentive nor opportunity for caring for themselves. Habits of life are careless in farming communities. The rush of early hours and the anxiety of getting the worst of the day's work done before the heat of afternoon, make for slipshod personal care on arising. Also farm work itself exposes the farmer's face to the conditions of all sorts of weather and particularly to the irritation from exposure to the sun, thus making the farmer's skin far more susceptible to keratotic influence.

One of the principal pre-cancerous conditions that the dermatologist has to deal with, is a keratosis due to activity of the pigment cells in the skin. When stimulated these cells act as an irritant and develop the raised brownish patches of keratosis that later become the pre-cancerous lesions. These lesions often come from old freckle spots, or other skin injuries, that, in the course of time, do not heal. Their favorite locations are the forehead, about the region of the eyes and on the cheeks. They are slightly raised, circular in shape, brownish patches that are covered with a fragile crust that crumbles on removal. When such patches are removed a few

bleeding pin points are to be found underneath. Sometimes the crusts are studded with prolongations that seem to fit down between the underlying cells. The crusts are of different thickness and color. In some cases there are a great many lesions scattered over the face, in others only a few. They appear most frequently in patients over 50 years of age and occur more often in the male than the female.

### FREQUENCY AMONG FARMERS

The cases occur about as follows: 70 per cent. among farmers, 10 per cent. among laborers (drivers, seaman or sailors), 5 per cent. among merchants in small towns, 5 per cent. among women, and the remaining 10 per cent. among a scattered class of patients.

Some 60 per cent. of the lesions appear on the middle third of the face, 5 per cent. on the neck, 10 per cent. about the ears, 20 per cent. on the forehead and 5 per cent. on the hands.

All of the lesions are very easily taken care of, none are deep and under proper treatment soon clear up. Those on the bridge of the nose and on the forehead prove the most stubborn to treatment. Those on the cheeks respond rapidly to proper care and the resulting marks, after cure, are hardly noticeable. It is somewhat difficult to clear up the pigmentation in brunettes and the lesions of thin skinned blondes have to be handled with considerable care. Patients who have a good cushion of fat underneath their lesions, get well under treatment in a very short time.

### PROPER CARE

All pre-cancerous lesions, if taken in time and properly handled, can be positively cured. The idea that they will get well of their own accord is wrong and physicians should use their influence to contradict this false notion, for a great deal of harm may come from pre-cancerous conditions if there is much delay in their treatment.

While a number of dermatoses often lead to a pre-cancerous condition, keratoses are among the most common causes, according to the reports of Darier, and John T. Bowen, of Boston, who called attention to this matter in speaking to the A. D. A., in Washington, 1903, emphasizing this contention as elaborated by Hartzell. Dubreuilh, in 1896, was among the first to comment on the relation between keratosis and pre-cancerous conditions of the skin. He was surprised at the frequency with which the condition occurred as

\*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

well as by the slight attention that had been given to its study.

I have briefly touched on this topic because it is one of the most common dermatoses met with and most often neglected by the practitioner, who passes it by as a simple, harmless skin affection

that will never grow into anything serious. As the contrary is true and the condition is very amenable to treatment it should be properly taken care of in all cases.

2013 2ND NAT. BK. BLDG.

## The Diagnosis of Incipient Pulmonary Tuberculosis\*

B. C. West, M. D., Dayton

Editor's Note.—Tuberculosis is so common that it is a good working rule to suspect its presence until the contrary has been proven by an eliminating examination. Any, all or some of the following signs may predicate its existence: weakness, hoarseness, hemorrhage, cough and so-called attacks of indigestion accompanied by fever. There is no task in physical diagnosis more difficult than to elicit by auscultation the incipient signs of pulmonary tuberculosis. The only phase of the respiratory murmur altered, according to Dr. West, is inspiration and this change is remarkable in that it affects pitch only, which is increased. If this increased pitch of inspiration has previously existed and prolongation of expiration becomes manifested one can be assured that the case under examination is no longer an incipient one. Cog-wheel respiration and crackle are also diagnostic. Limited respiratory excursion of the affected lung will also help the examiner in coming to a definite conclusion. While laboratory tests are of value they cannot replace the skill and experience of the internist in diagnosing incipient tuberculosis.

THE importance of some tasks in medicine is often emphasized by the difficulties attending their proper execution. If the factors, at work for a given purpose, are dissipated by ignorance, prejudice, or otherwise, the results will be correspondingly affected. On the contrary, if there is concerted action on the part of all the elements involved, with a clear vision of the end sought, the results will eminently justify our greatest endeavor.

### THE PHYSICIAN'S RESPONSIBILITY

I cannot conceive of any part of our profession effort so abundantly fruitful, or that is surrounded by fewer obstacles, than the early diagnosis of pulmonary tuberculosis. The public mind is very insensitive, illiterate or skeptical regarding the suspicious manifestations of early tuberculosis and even grossly negligent in personal care and of the public welfare when the disease is unmistakably present in the advanced stage. Where shall we place the responsibility for this state of affairs and what is the remedy? There is only one answer: the physician must assume largely the responsibility for the former and indeed all the burden of applying the proper remedy. No one is better fitted by virtue of his special knowledge, intimacy, respect and confidence of the patient. If this assertion is true, as doubtless it is, by what process of activity would the greatest benefit be secured? If the State and Nation were purged of all cases of advanced tuberculosis, the earliest possible diagnosis made in incipient cases, the laity schooled in suspicious subjective manifestations and the necessity of seeking competent medical advice promptly, advanced or even moderately advanced tuberculosis would be the exception. Once

free from advanced cases and measures employed to maintain it, the physicians diligently searching for evidence of the disease in its incipency and militant in educating his patients regarding this menace to health and life, would do more than all other agencies combined toward eradicating the plague. This can be accomplished within the confines of our office without special effort. It is a duty to perform. There are few families that do not visit their family physician three and four times a year. This is the opportunity. We owe it to the public and what is essential to its welfare is manifestly good for us and our families.

It is possibly true that tuberculosis is by far more prevalent than is generally recognized by physicians. It is feasible to suspect that all of us contract the disease within a life-time, the majority getting well without ever knowing they had it. I believe that at least 70 per cent. of cases coming for general examination will show physical signs either of a healed or active pulmonary tuberculosis.

I remember that some years ago in the business world a man was usually considered to be honest until he was known to be otherwise. Today the opposite idea is true and that idea has permeated every phase of business. This is an excellent attitude for the physician to assume toward his patients in relation to tuberculosis. *Tuberculosis is so common that it would be wise to suspect that a patient has or has had the disease until we are reasonably sure he is free from the malady.*

### THE SUBJECTIVE SYMPTOMS

Most of the suspicious subjective symptoms are rarely manifested collectively but usually only one of them is present to direct our attention toward the source of trouble.

1. *Weakness* is the most common and consistent

\*Read before the Medical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.



subjective symptom. I cannot recall a case in which the patient did not complain of getting unduly tired before the day's work was finished. It is usually out of all proportion to the amount of trouble we may find in the chest.

2. *Hoarseness* that tends to linger, recurring apparently unattended by any general disturbance should arouse our suspicion. The patient representing this symptom should be kept under observation until we can definitely prove the absence of other evidence of tuberculosis and attribute the condition to other well-known more or less simple causes.

3. *Hemoptysis* is largely associated with the late stages of the disease. It is exceedingly important if present in incipient cases and, in my opinion, is the most significant single subjective complaint. A patient may cough up, without effort, a mouthful of blood unassociated with other subjective symptoms, even without any recognizable physical signs. This symptom has recently been of service to me, associated, however, with very early physical signs of which we will speak later.

4. *Cough* persisting longer than two weeks should make one feel apprehensive. Not necessarily productive but more commonly unattended by expectoration. Cough does not merit the significance that has formerly been attached to it. Its absence should emphasize, rather than detract, from the clinical picture when it is a well-known fact that advanced cases frequently have little or no cough. Clearing of the throat, particularly of a morning, without evidence of simple infection about the throat, is more important than cough. We should also rule out the cough that is often associated with other causes, such as cardio-renal disease.

5. A patient complaining of what he calls *attacks of indigestion* is giving a bit of valuable evidence when properly interpreted. I have never seen an advanced case that did not complain thusly, but it is also frequently present in early cases. The patient is usually unable to explain the trouble from a dietetic standpoint, but the attractive feature is that the attack is accompanied by fever. Disturbance of the stomach does not cause fever. This symptom-complex will usually explain the pathological process unrevealed in a normal appendix after incision in the right iliac region. However, the surgeon attaches significance to a slight resistance to the appendix or an attenuated band very cautiously attaching it to the neighboring gut, thus explaining the unknown condition existing in the lung.

If there is added to the above chief complaints, either singly or in groups, slight fever— $99^{\circ}$  to  $99\frac{1}{2}^{\circ}$ —and some loss of weight, otherwise unaccounted for by recognizable physical signs, observation and repeated physical examinations

should obtain until the diagnosis of tuberculosis is no longer in doubt.

The patient can readily be taught the significance of the foregoing symptoms. The statements should be specific as to the suspected condition, otherwise the cooperation of the patient will usually be negligible.

#### PHYSICAL SIGNS

Physical signs eventually come to our rescue if the patient does not get well before they are recognized.

We will have nothing to say about percussion and palpation save that they are of no value in the early diagnosis of pulmonary tuberculosis.

There remains for discussion inspection and auscultation; the latter renders the greater service.

#### AUSCULTATION

The adventitious sounds heard in the region of the pre-cardium associated with cardiac disease are frequently difficult to analyze. The study of the mechanism by which they are produced enables the clinician to determine with a certain degree of accuracy the structure involved. *There is, however, no task in physical diagnosis more difficult than to elicit by auscultation the incipient signs of pulmonary tuberculosis.* Sometimes I wonder if this task is ever mastered without special aptitude on the part of the examiner. His ability is greatly militated if he is endowed with a musical sense.

To interpret the significance of abnormal respiratory murmurs elicited, it is essential to understand the various types, phases and location of respiratory murmurs heard from within a normal chest. I fear this is often the chief source of error in the diagnosis of a pathological process. To clinch the diagnosis it is even more essential to recognize the normal than the abnormal. This comparative study can, in most instances, be accomplished in the same patient for he has two lungs, subdivided into various lobes. The surgeon is always given credit for what he does—frequently for what he does not do—but if he is on the job he will never make a diagnosis of a suspicious Colles fracture without examination of the sound radius. Therefore the clinician should study pitch, intensity and duration of the normal respiratory sounds with a positive advantage when he encounters a chest in which there are more or less anatomic changes particularly in their beginning.

*The only phase of the respiratory murmur altered in incipient tuberculosis is inspiration. This change is remarkable in that it affects pitch only, which is increased.*

As I have intimated before this alteration in pitch is exceedingly difficult to interpret and beyond my ability to explain. I know of no physical sign concerning which so little can be said in an explanatory manner and from which so

much can be gained if persistently practiced and properly interpreted. This type of breathing is never heard in a normal chest and when heard persistently at the apex is extremely significant.

A lung will frequently get well without manifesting any other physical sign. It is the time when we can tell patients they will get well if they are willing to co-operate. They do not always do this; particularly the working class of people. Here is the opportunity for the study of physical signs which mean the beginning of consolidation. *If increased pitch of inspiration has previously existed and prolongation of expiration is now manifested, one can be assured that the case is no longer an incipient one.*

*Cog-wheel respiration* may be present and often associated with the above type of respiration. It adds considerable weight to the diagnosis if present from day to day. It affects only inspiration and must always be differentiated from the cardio-respiratory murmur which often simulates it very closely.

*Faint respiration* when localized to an apex is also a valuable sign of incipient tuberculosis. It is commonly present in advanced cases but its association with some of the early subjective symptoms increases its own significance as an early physical sign.

The difficulty of eliciting a *crackle*—for there may be only one—is often very great. But when present and elicited at successive examinations at the apex no one should doubt its value as a physical sign of tuberculosis. Its value is mitigated, however, by natural or mechanical causes, such as the friction of the stethoscope, hair on the skin, or muscle sounds. The first two conditions can usually be eliminated by moistening the skin and avoiding the use of the phonendoscope. Muscle sounds are likely to be heard at the end of inspiration when voluntary muscles are brought into play. There may be a roar or rumbling sound or distinct, short, dull, low-pitched sounds frequently countless in number. The crackles are more clear-cut, higher-pitched, more superficial and can usually be counted. They are heard at the end of deep inspiration or better, I believe, associated with cough at the end of forced expiration. I confess I am sometimes in doubt whether a crackle is present or not, but if we hear repeatedly at the apex the same thing relative to pitch, intensity, etc., we are not likely to be led into error.

#### INSPECTION

If *inspection* aids us at all in the early diagnosis of pulmonary tuberculosis, as represented by the physical signs detailed, it follows considerable practice and acuteness on the part of the physician. *The slightness of limitation of respiratory excursion of the affected lung remains to be seen. It can be detected in the majority of cases.*

*Litten's sign* bears about the same relation to

the diagnosis as limitation of expansion of the affected lung. However, slight limitation of excursion of the diaphragm on the affected side can usually be noted. It must be remembered that pleuritic adhesions will render this sign positive when the lung is sound.

#### LABORATORY DIAGNOSIS

What I have to mention as to laboratory means of diagnosis are merely words of precaution. There is no intention of being derogatory. The finding of the bacillus should not occupy the place of pre-eminence which it has so long enjoyed. If it is found early it is frequently accidental, depending on the site of the lesion. The finding of the bacillus more commonly indicates a moderately advanced stage of the disease when the symptoms and physical signs should not be wanting. Therefore, smears can be made as a routine but the diagnosis should not be long delayed by negative finding. The history, clinical evidence, physical signs after repeated examination and observation, if necessary, will reward us justly if we will but stand firmly in spite of a negative slide.

#### TUBERCULIN REACTION

The *tuberculin reaction* renders a definite degree of service but it is of questionable value in certain classes of cases. We usually abide by its clinical phenomena if manifested in children who possibly have not had tuberculosis before. When the reaction is present we should rule out bone tuberculosis since it is a disease of early life. As we advance in the scale of life, when the chances of infection are multiplied, its diagnostic value is decreased.

We have already mentioned that one may get well of the disease without manifesting more than one or two of the subjective symptoms. A patient should not be declared tuberculous by merely showing a positive reaction.

In the present state of our knowledge it is difficult to estimate the value of the tuberculin reaction, but we are very likely to over-estimate it if certain facts are not borne in mind.

The outlook for an aid in *serum diagnosis*, bearing somewhat the same relation to tuberculosis as the Wassermann does to syphilis, is very encouraging. It will assist greatly in making an earlier diagnosis in those cases with positive clinical manifestation but without physical signs. However, the history, clinical picture and physical examination should and will not be discarded in favor of any other means of diagnosis.

So much is expected of the X-ray that I am certain we are likely to be misled by negative finding. I believe it is unjust to rely upon it in incipient cases.

FIDELITY MEDICAL BLDG.



# The Laryngologist and Diseases of the Lungs\*

John A. Thompson, M. D., F. A. C. S., Cincinnati

**Editor's Note.**—The direct, local treatment of inflammatory diseases of the lungs gives results that cannot be obtained in any other way. The training and skill of laryngologists fits them especially to give this treatment, yet few of them do this very essential and profitable work. The diseases of the lungs in which local treatment is useful, are acute and chronic inflammation of the trachea and bronchi, bronchiectasis, bronchial asthma, pulmonary tuberculosis, syphilis and emphysema. The recovery from either bronchial or lobar pneumonia may also be greatly aided. The direct injection of one or two drams of an oily solution with the tracheal syringe, under control of the laryngeal mirror, is the effective method of use. Dr. Thompson considers the commercial mixtures on the market for this purpose too strong and uses in preference a combination of atropin, adrenalin, menthol and camphor in oil of sweet almond and liquid petrolatum.

**F**OR many years the studies of Laryngologists have been directed toward questions of diagnosis and operative technique. We have given much thought to better tonsillectomies, accessory sinus operations, septal corrections, and as all of us treat ear diseases, to better mastoidectomies. The developments of the great war with its air scouting and fighting have concentrated our studies on equilibrium and vertigo, and later, plastic surgery. The wonderful improvement in our diagnostic and operative methods can best be appreciated by one who has worked through all these thirty-five years of constant growth in knowledge and technical skill.

Alongside this special field of study which we have cultivated with so much benefit to diseased and suffering humanity, lies another, neglected one, in which our work would yield equally beneficial, even if less spectacular, results. *The direct, local treatment of inflammatory diseases of the lungs gives results that can not be obtained in any other way. The training and skill of laryngologists fits them especially to give this treatment, yet very few of our number do this very essential and profitable work.*

## DIRECT TREATMENT OF PULMONARY DISEASES

The pathological changes in the lungs in inflammatory diseases are the same as those we are accustomed to see and treat in the nose and larynx. We can see the effect of our remedies in these regions and build up a rational therapy from our observation. Why not apply our knowledge to the same conditions in the lower respiratory tract? The fear that harm may be done by tracheal injections of remedies intelligently chosen, has been proven baseless by the experience of some of our members who have given thousands of injections yearly, for many years.

*The diseases of the lungs in which local treatment is useful, are acute and chronic inflammation of the trachea and bronchi, bronchiectasis, bronchial asthma, pulmonary tuberculosis, pulmonary syphilis and pulmonary emphysema. The recovery from pneumonia, either bronchial or lobar, can be greatly aided by local treatment.*

## METHODS APPLYING AND DRUGS FOR DIRECT TREATMENT

There are three methods of applying treatment directly to the pulmonary mucosa. Nebulizers and sprays are not efficient because they do not carry enough of the medicine to the diseased surfaces. With the tracheal syringe one or two drams of an oily solution can be used each visit without causing cough or strangulation. Watery solutions can not be used but fortunately our best remedies are soluble in oil.

In acute inflammation, the first indication is to reduce the swelling of the musosa. Epinephrin will do this, and by the method discovered by Lloyd it can be dissolved in oil and retain its therapeutic action. The next indication is to lessen the secretion, in the second stage. Atropin has a direct inhibitive action on the muscles and mucus glands of the bronchi through the peripheral nerves and therefore dilates and dries the bronchi. The alkaloid is soluble in oil so it can be added to our mixtures used for tracheal injection. The next indication is for a local analgesic to lessen the irritability of the inflamed mucosa and stop the harassing cough that robs the patient of his rest. Three remedies meet this indication.

Monochlorphenol, menthol and camphor are all analgesics, the first quite actively so, and in addition all are active antiseptics. Monochlorphenol is much more toxic than the others. It should be mixed with liquid petrolatum in a separate solution, ten minims to the ounce, and some of it added to our usual mixture at the time of treatment. The amount added should be determined by the acuteness of the inflammation at the time. From three to five grains of menthol and five grains of camphor to the ounce of oil can be used without irritating an inflamed membrane. *The commercial mixtures on the market, sold to doctors, who let drug houses do their therapeutic thinking for them, are all too strong.*

In certain purulent conditions oily solutions of creosote or guaiacol are beneficial.

Combining these remedies gives us the formula for an ordinary injection.

R

Atropin (Alkaloid) .....	gr. 1
Epinephrin .....	gr. 2

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

Menthol .....	grs. 48
Camphor .....	grs. 80
Amyg. Dul. ....	$\frac{3}{4}$
Petrolat Liq. ....	$\frac{3}{4}$ 12

M. S. For tracheal injection.

The usual injection will give doses as follows, Atropin 1/64 gr. Epinephrin 1/32 gr., Menthol about one grain, and Camphor about one and one fourth grains.

#### TECHNIQUE OF TRACHEAL INJECTION

The best way to give the injection is as follows: with the laryngeal mirror in position to give a clear picture of the larynx, guide the tip of the syringe over the glottis, without touching any part of the throat, and inject the solution while the patient inspires slowly and deeply. You can see the solution dropping between the cords into the trachea. With some patients, who lack self control and gag when the mirror is introduced, it is best to depress the tongue and inject while the patient inspires, with the tip of the syringe in the median line just in front of the pharyngeal wall. Some of the solution will be lost by this method but most of it will enter the trachea.

The hysterical group of patients who will tolerate neither mirror nor tongue depressor, can be treated by passing the tip of the syringe back nearly to the pharyngeal wall, letting them close the mouth over the tip and injecting as they inhale.

Freudenthal claims that no injected solution will pass beyond the trachea. As he used irritating watery solutions of astringents I can not accept his conclusions as applying to non-irritating oils. Even if none of the oil I have used penetrates deeply into the bronchioles, the menthol and camphor vaporize rapidly. There will be enough of them in the exhaled breath to irritate the eyes of the doctor in two minutes after the injection is used. We have only to recall ether and chloroform to remind us how active vaporized drugs may be.

#### COMBATING THE EXTENSION OF COLDS

Most *colds* that result in an acute bronchitis begin in the nose. The infection spreads from this region to the pharynx, larynx, trachea and bronchi. If the patient is seen before this extension has occurred injection will prevent extension if used in addition to the nasal treatment. The patient will recover in four days instead of suffering two weeks.

If the acute inflammation is already present in the bronchi when the patient is first seen, daily injections added to the internal medication will lessen the severity of the attack and shorten it one-half.

Internal medication has very little curative action in chronic inflammation of the trachea and bronchi. Direct injections will cure these cases,

sometimes promptly, sometimes after a long course of treatment.

#### ILLUSTRATIVE CASE REPORTS

Two case reports from my records will corroborate these statements.

CASE 1. Leroy H., aged 10, was brought to me October 27th, 1915. When an infant he had a bad attack of acute bronchitis, from which he never made a complete recovery. The cough was always worse at night and the expectorations so profuse that the parents had to help him from his bed from one to three times every night to relieve his dyspnoea. During the nine years of illness, before I saw him, every kind of medical treatment known to the parents or their family doctor and most forms of blatant quackery had been tried. My promise of relief by tracheal injections was met by a smile that said plainer than words, "you are a plausible liar, but we will try anything once in the hope of getting relief for the boy." He was well in six weeks after the tracheal injection treatment was begun. I have treated him for a few slight colds in the last five years, but there has been no return of the chronic disease. He had influenza in 1919, with no return of the bronchitis. This boy was sent to me by a neighbor, an official of a life insurance company, who came for treatment of an acute attack. Through some oversight, his history was not taken. When I dismissed him he said, "You are the first man who has stopped my cough in twenty-four years." His bronchitis had followed Pertussis.

CASE 2. Of a different type was the case of Frank L., aged 35, first seen in July, 1914. He had suffered from chronic bronchitis and asthma for years. Having a family to support he was compelled to work in spite of his illness. The dyspnoea at times was so great he would have to sit down on the sidewalk to rest while going to and from the office where he was employed. The *physical examination* of the chest showed the usual signs of his disease. Expectoration of muco-purulent matter was very profuse. The constant and excessive use of cough mixtures for years had damaged his stomach until digestion was very poor. Mentally he was hypochondriachal, almost ready for the melancholic ward of a hospital for the insane. Tracheal injections were begun and the internal medicine stopped as soon as I could persuade him to do so. He was irregular in his attendance for treatment, stopping to try some new panacea he had heard of from some chance acquaintance, but always returning for the relief the injections gave him. It was two years before he was in condition to omit regular treatments, and was told to come in only when he had a cold. He is now normal mentally, has gained twenty pounds in weight and his asthmatic attacks are slight and rare. I have purposely chosen for illustrative case his-



tories, old ones that demonstrate the permanence of the results.

#### VALUE IN BRONCHIETASIS

A little consideration of the morbid anatomy of bronchiectatic cavities will show the hopelessness of the attempt to disinfect them through the blood stream. Their walls are scar tissue with less than the normal vascular supply. To carry any effective medication to them would require a concentration, toxic to normal tissues. If the bronchiectatic cavity is in a location where gravity or posture will aid in carrying injected medicines to it, much benefit will be received from tracheal injections. The amount of the discharge can be lessened, the offensive odor overcome, and septic absorption partly prevented.

#### BRONCHIAL ASTHMA

I have said for years all cases of *bronchial asthma* also had chronic bronchitis. This opinion is endorsed by Brown ("Asthma," page 18) who says "commonly non-passive expiration is indirectly caused by respiratory tract catarrh; and this involving the bronchi inflames and swells the bronchial mucosa, causing it to narrow the lumen of the bronchi, and thus induces simple dyspnoea." My own observation has convinced me that paroxysms of asthma are preceded by exacerbations of the chronic inflammation. *Curing the bronchitis by direct medication, cures the asthma if treatment has begun before the lungs become emphysematous or the heart has been weakened beyond repair.* During acute paroxysms the combined action of the epinephrin and atropin relieves the dyspnoea. The analgesic action of menthol and camphor aids in making the patient comfortable and the duration of the attack is lessened by local treatment.

#### DIRECT MEDICATION AND PULMONARY TUBERCULOSIS

In *pulmonary tuberculosis* no direct curative effect on the disease can be expected from local medication. The complicating laryngitis and bronchitis can be helped and the paroxysms of coughing decreased to half the former number. In one of my patients curing the laryngitis, so the tickling cough did not keep him awake at night, was the deciding factor in his recovery. As soon as he could get his normal sleep he began to gain, and made a complete recovery from the lung tuberculosis. *A healthy mucosa will not be infected by the tubercular sputum and the fatal laryngeal tuberculosis can be prevented by regular injections. The control of the cough by tracheal injections makes it unnecessary to give narcotics so the nutrition of the patient is not impaired by medication.*

#### TRACHEAL INJECTIONS IN SYPHILIS, EMPHYSEMA AND PNEUMONIA

The cure of the bronchitis of secondary syphilis

can be hastened by using tracheal injections in addition to the specific treatment. Sometimes in tertiary syphilis gummata form in the lungs and break down into abscess cavities. The only method of treatment that will cure these cases is to combine tracheal injections with the constitutional therapy.

Where the anatomical changes of pulmonary emphysema have occurred there is of course no cure, but the extension of the disease can be prevented by curing the accompanying bronchitis with tracheal injections.

Recovery from pneumonia, either bronchial or lobar, is sometimes delayed, the expectoration is profuse and the pathogenic bacteria are still present in the sputum. The time of convalescence in these cases can be greatly shortened by daily tracheal injections.

In the great war thousands of soldiers who had been gassed were helped to recovery by tracheal injections. Unfortunately the report of Page on these cases is not yet available.

#### RECAPITULATION

The inflammatory diseases of the lungs are the same pathologically as those we treat in the upper air passages.

We have a rational therapy from our observation of the effect of treatment in the nose and larynx.

This therapy can be applied directly to the lungs, curing inflammations not benefitted by internal medication.

628 ELM STREET.

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*Acridine G. H. and Proflavine G. H.*—Acridine and proflavine have been admitted to New and Non-official Remedies. However, the products sold by the Heyl Laboratories as "Acridine G H" and "Proflavine G H" have not been accepted for New and Non-official Remedies because (1) their quality did not conform to the Council's standards and (2) in the advertising issued for these drugs the manufacturer failed to give the unfavorable as well as the favorable clinical reports that have been published (Jour. A. M. A., July 3, 1920, p. 51).

*Antidote for Snake Poison.*—No Anti-Venom for snake poison has been accepted for New and Non-official Remedies. Experiments looking toward the production of anti-venom for snake poisoning seems to have met with some success, but the use of these products in therapy is still in the experimental stage. In general it has been shown that an anti-venom prepared for one species is not always effective when used against the venom of another species (Jour. A. M. A., July 3, 1920, p. 51).

## The District Tuberculosis Hospitals\*

R. R. Richison, M. D., Springfield

**Editor's Note.**—From a careful study of the legal history of the District Tuberculosis Hospital, it is easy to understand, with Dr. Richison, how the infirmity stigma has been placed on these institutions. In reality they should be real scientific hospitals and not cheap lodging-houses. There is a large class of cases of tuberculosis in every community who need institutional care as badly as the indigent class, but who will not submit to being declared paupers. Those financially able and willing to part or full-pay for their hospitalization but justly demand, in Dr. Richison's opinion, quarters private or semi-private. There are few if any provisions made in our District Tuberculosis Hospitals for this class of patients, and yet privately owned sanitoriums have not the capacity to take care of the pay tuberculosis patients in the state. Some provision for the care of these patients must be made. Also it is important for the profession to get behind the movement of the State Tuberculosis Superintendents' Conference in putting across the report on Special Construction and Minimum Standards.

FOR three years I was superintendent of the Springfield District Tuberculosis Hospital and I do not believe I have ever engaged in any work that appealed to me as being more worth while than that work.

I do not desire that what I say in this short paper should be construed as destructive criticism. While I am now engaged in other work, I still have a deep heart interest in the same institution and have faith in its future. While I realize that I was unable to bring about all the things I planned and desired during my term of office and to bring the institution to a highly scientific basis, I still believe that with a great deal of real, hard constructive work it will be recognized as a leading institution of its kind.

I will endeavor to take up in this paper only two propositions pertaining to the district tuberculosis hospitals. *First:* The legal history of the district tuberculosis hospital, showing how firmly the infirmity proposition from the first movement, in the establishment of these institutions, was linked with the hospital. *Second:* A discussion of the minimum standards for tuberculosis hospitals as proposed by a committee appointed by the Tuberculosis Hospitals Superintendents' Conference.

### THE LEGAL HISTORY OF THE DISTRICT TUBERCULOSIS HOSPITAL

The legal history begins with the passing of Section 3139 of the General Code which reads: "On and after January 1, 1911, no person suffering from pulmonary tuberculosis, commonly known as consumption, shall be kept in any county infirmary except in separate buildings provided for that purpose only."

Section 3145 reads as follows: "The infirmity directors shall investigate applicants for admission to the hospital for tuberculous who are not inmates of the county infirmary, and require satisfactory proof that they are in need of proper care, and have pulmonary tuberculosis.

(Our later law) Section 3146, (as amended) reads as follows: "The district hospital for tu-

berculosis as hereinafter provided for, shall be devoted to the care and treatment of those admitted to the county infirmary within the district afflicted with tuberculosis and of other residents of the district suffering from the disease and in need of proper care and treatment."

*From a careful study of the quotations from the legal history of the district tuberculosis hospitals it is easy to understand how the infirmity stigma has been placed on these institutions. (I contend they should be real scientific hospitals and not infirmaries or cheap lodging houses.)*

A great many of these institutions are in whole or in part awakening to the county infirmity proposition. In Springfield district two counties have broken entirely away from it and do not require that the cases come through the county commissioners and infirmity superintendent, but the other two counties require that application be first made to the board of county commissioners and be referred by them to the superintendent of the county infirmary and investigated and conducted to the institution, if in his judgment they are proper persons to be admitted to the hospital. *Needless to say the only cases admitted from these counties are absolutely beyond doubt indigent cases and it is absolutely impossible to appeal to any case of tuberculosis in those two counties that are not of the typical infirmity type.*

On a great many occasions I have been advised of a case existing in one or the other of these counties and have suggested they make application for admission to the hospital, but before they had traveled the entire route and been declared paupers they give it up as a bad job and remain at home.

Under the infirmity handicap these institutions will not reach their full degree of efficiency and again linked as they are with the county infirmaries there is that tendency to conduct them on the same basis as the infirmity.

I contend they must be legally and in every other way separated.

### CARING FOR PART- AND FULL-PAY PATIENTS

*There is a large class of cases of tuberculosis in every community who need institutional care*

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.



as badly as the indigent class, but who will not submit to being declared paupers. Those financially able and willing to part-pay or full-pay for their hospitalization but justly demand, I believe, quarters private or semi-private. There are few or no provisions made in our district tuberculosis hospitals for this class of patients. I am sure of my ground when I state that privately owned institutions for treatment of tuberculosis have not the capacity to take care of the pay patients in the state. There are very few private institutions in the state and they are of very limited capacity.

I feel that we have made little or no provision for the above class of people suffering with tuberculosis. I feel we can make provision for them in the district tuberculosis hospitals without a great deal of expense and possibly without any expense in some institutions if it is possible to separate the hospital from the infirmary idea and further the system in vogue in having these cases come through the infirmary superintendent or even the county commissioners is wrong to say the least.

Since the above was written I was invited to be present at a meeting of the joint board of the county commissioners of one of these district tuberculosis hospitals. I put the proposition up to this board and I immediately received a response from the president that they insisted on these cases following the old order of things so that they could keep a check on the cases and not let every case that desired hospitalization enter the hospital. He also brought up the argument that it kept the operating expense down for that county.

Gentlemen, this condition that I have attempted to bring to your attention is a burning shame.

#### MINIMUM STANDARDS FOR TUBERCULOSIS HOSPITALS

The State Tuberculosis Superintendents' Conference appointed Dr. J. R. McDowell and myself a committee to draw up minimum standards for tuberculosis sanatoriums. The report of the committee was printed in the February and March numbers of "The Ohio Public Health Journal," so I take it that you are all familiar with it.

To my mind the regulations suggested by this committee should be supported in its entirety, but there are a few regulations which will do most to put these institutions on a higher plane.

#### SPECIAL CONSTRUCTION

(a) A room or rooms shall be set apart in all institutions for examination and treatment, fully equipped for nose, ear and throat work. In each institution of 100 beds or over equipment for minor surgery should be provided.

(b) A laboratory should be provided in each institution for making routine sputum and urine examination.

(c) X-ray equipment for stereoscopic work should be provided in institutions of 40 beds and

is recommended for all.

(f) Recreation or social room shall be provided for patients in all institutions.

(g) A room shall be provided for the care of the dead which can be reached by attendants with the least possible disturbance to patients and from which bodies can be removed readily and inconspicuously.

#### RECOMMENDATIONS

A special committee should be appointed to recommend standard methods of examination and record of same, nomenclature, classification of cases and the medical section of an annual report.

I believe the adoption of these standards by the Public Health Council in the regulations of the state department of health is greatly to be desired as the average board of trustees take up very slowly any proposition entailing an additional expenditure of money and they will not be accepted by all institutions until adopted by the public health council.

I desire to make a final public appeal for the future of these district tuberculosis hospitals. I firmly believe in their future, but certain counties in certain districts and certain institutions as a whole are either holding their progress back or holding them stationary, in either event they are not meeting the full needs of the communities they are intended to serve.

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#### New Books

*International Clinics*. Vol. II, Thirteenth series, 1920. Illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, ophthalmology, otology, rhinology, laryngology, hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by H. R. M. Landis, M. D., Philadelphia, with the collaboration of Charles H. Mayo, M. D., Rochester; William S. Thayer, M. D., Baltimore; Frank Billings, M. D., Chicago; A. McPhedran, M. D., Toronto; J. W. Ballantyne, M. D., Edinburgh; Hugh S. Cummings, M. D., D. P. H., Washington, D. C.; John G. Clark, M. D., Philadelphia; James J. Walsh, M. D., New York; Charles Greene Cumston, M. D., Geneva, and John Foote, M. D., Washington, D. C. J. B. Lippincott Company, publishers, Philadelphia and London.

*Diagnosis and Treatment of Brain Injuries*, with and without a fracture of the skull, by William Sharpe, M. D., Professor of Neurologic Surgery, New York Polyclinic Medical School and Hospital; Consulting Neurologic Surgeon, Manhattan Eye and Ear Hospital, Hospital for Ruptured and Crippled, Beth Israel Hospital, New York City, and Nassau Hospital, Mineola, Long Island, etc. 232 illustrations. J. B. Lippincott Company, Philadelphia and London.

# How We Attempt to Do Scientific Obstetrics in General Practice\*

A. A. Brindley, M. D., Port Clinton

Editor's Note.—A careful perusal of Dr. Brindley's paper will convince even the skeptical that the general practitioner, who really wants to, can do scientific obstetrics. Success in such an attempt requires a well thought out plan strictly adhered to and conscientiously practiced. There is no reason why, with all the facilities that are at hand for the practitioner to acquire a thorough knowledge of the best in obstetrics, that he should use anything else. It is quite important to be impressed with the care of the patient during pregnancy so that various complications, so apt to arise later, may be prevented or at least held in control. It is quite as possible for the parturient woman to receive as excellent care during child-birth in the home as in the maternity hospital if only the obstetrician will follow the same aseptic procedure. Painsstaking post partum care of the mother as well as the new-born child is essential.

WHEN asked by the Chairman of this Section to present a paper at this meeting we were in doubt as to the advisability of a general practitioner presenting a paper before a group of obstetric specialists. However, we feel that in reality the audience will be made up of men who show a special inclination to obstetrics rather than a group of purely specialists in obstetrics. We shall, therefore, endeavor to present to you as briefly as possible how we attempt to practice that branch of medical science which is admittedly a bug-bear to the general practitioner.

The subject of obstetrics, whether practiced as a general practitioner or an obstetrician, readily divides itself under four general heads, viz.; (1) the care of the patient during pregnancy; (2) the care of the patient during labor; (3) the care of the patient during the puerperium, and (4) the care of the child after labor.

## CARE OF THE PATIENT DURING PREGNANCY

While it is true that a greater number of the patients of the general practitioner are seen at the time, or rather at the termination of labor, than during pregnancy; it is also true that if the general practitioner would make more of an effort his patients would prefer his following the case from conception to termination, rather than merely using his services as that of a highly trained midwife. The most important treatment in the care of a patient during pregnancy consists of a *complete physical examination*. We attempt to follow, as nearly as possible in our practice, the methods designated by the American College of Surgeons as regards the anamnesis and method of physical examination as well as the records of labor, puerperium, and the records of the child. Often-times much of the worry and trouble as well as the morbidity during labor can be prevented if the general practitioner will take the time necessary to elicit a careful history and to make a complete examination of the patient. Special attention should be paid to the teeth and the organs of digestion as well as the dutiful examination of the chest and

cardio-vascular system. Next in importance, as a part of the examination, is the mensuration of the patient.

It is not so much the ability to diagnose an abnormal obstetric condition, as it is the prevention of this condition, that stamps a man a successful practitioner of obstetrics. It is not necessary for a general practitioner to make all the detailed measurements required by the specialist, but one should know the few important measurements which will tell you whether your case conforms to that large group of normals or is one of the few abnormal pelvises. It is a perfectly simple procedure with the aid of a pelvimeter to determine the distance between the spines, crests, and trochanters, and the approximate measurements of the pelvic outlet and inlet.

The importance is best illustrated by the following case:

Mrs. H., aged 23, seen during the last month of her second pregnancy, gave a history of having had cesarean section fourteen months prior, and consequently as we were unable to elicit an indication for the surgical termination of labor our minds were much relieved when upon mensuration we found the measurements to be well above average. However, this patient had rather a tedious labor necessitating instrumental delivery.

It is of prime importance that the urine be examined repeatedly during pregnancy. The patients whom we are unable to see often we are able to obtain specimens from by parcel post. Once monthly usually suffices, up to the latter third of pregnancy when specimens should be examined bi-monthly or even weekly, if possible. A chemical examination will be all that is necessary in most cases.

The regulation of the patient's diet is well within the province of the practitioner. We invariably try to prescribe a diet which will at once provide the most nourishment and prevent constipation. Remembering at all times the admonition of Porter that "Stout women are usually handicapped in labor. They almost always go over their time. Hence, the fat women should be placed on a strict diet from the beginning." Under no other conditions are patients so prone

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.



to present idiosyncracies of diet as they are during pregnancy. With the regulation of diet, systematic exercise should be prescribed, especially to those patients who so often fall to the lot of the general practitioner, the daughters who have returned home to put the baby under the care of their old family physician during the period of pregnancy and child-birth.

#### CARE DURING LABOR

Every physician doing obstetrics has certain well-founded ideas as to how the patient should be cared for during labor. We have culled a little here and appropriated a little there until we have formulated a routine which we attempt to use in all of our cases. This routine consists, *first*, in the preparation of the patient, and here we have appropriated a bit of useful information from Dr. Porter, and this is the use of castor oil. Routinely as soon as our patients feel their first labor pain we prescribe two ounces of castor oil, if at term, and in cases of large babies in obese women we have often been able to induce labor prematurely by the above dose repeated in twelve hours for as much as five or six doses, if necessary. No reference is made in any of the literature to which we have had access, of any specific action castor oil may possess in uterine musculature. But certainly it has, in our experience, made the majority of labors less tedious and prevented many a case of threatened dystocia.

In all of the cases in which we are so fortunate as to have a trained nurse in attendance we prescribe the same toilet as we would for a gynecological operation. The pubes and vulva are shaved and cleansed. A sterile douche is given and a sterile dressing applied. It is well then to prepare the bed, or see that it is prepared. We use a non-absorbent pad or sheet, sterile, covered by a sterile sheet and towels with sterile sheet for the patient. We have given up the use of the Kelly pad except for hospital work, where proper facilities may be had for its complete sterilization.

*The examinations of the patient should be as few as possible and if the necessary information can be elicited from an external examination supplemented by a rectal examination, this method should be used.* I think that this is one point upon which all obstetric specialists are agreed and which is followed out less uniformly by the general practitioner doing obstetric work than by any others. Certainly it is true that the ratio of infections increase in direct proportion to the number of examinations and manipulations made internally.

We attempt the same method of preparation for ourselves as one would in a surgical amphitheatre, scrubbing the hands thoroughly, cleansing with cyanide of mercury solution, one to one-thousand, and wearing sterile gown and gloves. With the ordinary obstetric case all the instruments necessary will be a pair of hemostats

and scissors for the cord, sterilized by boiling.

#### HANDLING THE FIRST STAGE

It is our custom in the management of the first stage of labor to give the patient as much rest as possible; stimulating drinks may be given often and we prefer that the patient should be up and about rather than in bed. In long, tedious first stages, with ineffective pains, we usually prescribe morphine sulphate, gr.  $\frac{1}{4}$ , or codein sulphate, gr.  $\frac{1}{2}$ .

#### THE SECOND STAGE AND THE PROBLEM OF ANESTHESIA

The trials of the general practitioner begin with the second stage of labor, for here it is that he will be confronted with the wisecracks of the neighborhood and it requires considerable diplomacy and tact in the presentation of this drama to keep the stage for himself and the patient; and free from intruders. There are two points which it is well to recall and they are the protection of the perineum and thereby the prevention of lacerations and the maintenance of flexion by doing away with useless examinations and manipulations.

The *question of anesthesia* seems to be a matter of choice with the general practitioner and that choice is nearly always chloroform. Where possible we believe nitrous-oxid-oxygen to be not only the safest but the best anesthetic to use. However, we do not find it advisable to use it beyond the stage of analgesia. Much credit is due Dr. E. I. McKesson of Toledo, for his researches in the matter of anesthesia during labor and we find his gas-oxygen apparatus to give the best services of any which it has been our privilege to use. Where nitrous-oxid is not available, chloroform is undoubtedly the anesthetic of choice, where it is not absolutely contraindicated, and we prefer giving that also only to the stage of analgesia, using ether for any obstetric operation or repair.

Much has been written and said about the use of pituitrin and we find much less use for it since we have routinely prescribed castor oil. However, in these cases of uterine inertia where the cervix is completely dilated, the presenting part engaged, its use is oftentimes of distinct value. A. G. Schultze, in a recent number of the *Lancet*, in a monograph on the "Action, Use and Abuse of Pituitrin," says that the dose for intrapartum use should never be as much as 1 cc. and the accepted dose should be 3 to 4 mls. and that the nearly ideal condition for its administration is encountered in a healthy multipara with fully dilated os and ruptured membranes, when presentation is normal, the foetus resting on a relaxed and easily stretched perineum, and the pains show a tendency to lag.

#### HANDLING THE THIRD STAGE

In the management of the third stage we find

many different opinions, not among obstetric specialists, as much as among general practitioners doing obstetrics. We are firmly convinced of the value of uterine massage for the maintenance of uterine contraction and believe that it facilitates the delivery of the placenta and membranes intact and prevents post-partum hemorrhage. We also practice late ligation of the cord rather than tying or clamping it as soon as the first lusty cry is heard. Budin states that an average of 92 cc of blood is lost to the child by early ligation of the cord. (Williams, J. W., "Obstetrics.")

In all cases of laceration requiring repair we prefer doing it immediately, and anything more than a first degree laceration we prefer doing under anesthesia. It is also our custom if we will not be within immediate call to prescribe ergot, one dram as soon as the placenta is separated, repeating the dose in three hours if there are any unusual signs of hemorrhage. Perhaps the most important matter in the management of the third stage is that of the examination of the placenta and membranes. These should be thoroughly examined and their condition observed, as a missing piece of placental tissue may easily be removed at this time and save a severe infection later.

It is our custom to administer the prophylactic for ophthalmia neonatorum as soon as the cord has been ligated. If this is done routinely then, it soon becomes a matter of habit and later embarrassment is avoided.

#### THE CARE OF THE CHILD

The care of the child at this time consists in thoroughly examining for abnormalities or malformations. Make sure that there is a patent anus. It is our custom in case of congenital phimosis to at once perform a dorsal slit. This, combined with the sterile gauze dressing for the umbilical cord and feeding instructions to the nurse, constitutes the first care of the child.

#### CARE OF THE MOTHER AFTER CHILD-BIRTH

The first question asked the general practitioner is usually, "Doctor, how long will I have to stay in bed?" We have no definite length of time for the lying in period, but allow the condition of the patient to be our criterion. Usually nine or ten days suffice, but if there be no untoward symptoms it is often advisable to allow the patient up in a chair at the end of six or seven days. The diet during this period should consist of liquids, in the main, for twenty-four to forty-eight hours, gradually increasing it with cereals, cooked vegetables, and some of the lighter meats until practically a regular diet may be given in five or six days.

We much prefer a saline or soap-suds enema rather than cathartics for regulation of the bowels and it is also our custom to allow the patient the use of a chamber rather than a bedpan.

After the first few hours we encourage our pa-

tient to frequently change her position while in bed. The breasts are cleansed with boric acid solution and alcohol, and nipples covered with sterile gauze. Gentle massage with warm olive oil is used should any thickening occur. The use of a properly fitted breast-binder not only helps prevent mastitis but also facilitates the flow of milk. Routinely we prescribe an abdominal binder of Canton flannel fitted to conform to the abdomen, the direction of the pressure being downward, thus making the binder tighter at the top. In case it is necessary to use a breast pump always remember to caution the patient as to its proper sterilization, and remember in prescribing massage that it should always be gentle and in the direction of the nipples.

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More Misbranded Drug Products and Nos-trums.—The following products have been the subject of prosecution by the federal authorities under the Food and Drug Act: Seelye's Wasatusa, Dr. Seelye's Compound Extract of Sarsaparilla, Seelye's Laxa-Tena, Seelye's Cough and La Grippe Remedy and Seelye's Fluorilla Compound (A. B. Seelye Medical Company) were misbranded because the therapeutic claims were unwarranted. Aspirin Tablets (Verandah Chemical Company) were misbranded because they contained no acetylsalicylic acid (aspirin). Dr. Grove's Anodyne for Infants (Smith, Klein & French Company) was misbranded because the therapeutic claims were unwarranted and because the carton failed to contain a statement of the quantity and proportion of morphine and alcohol contained therein. Cacapon Healing Water (Capon Springs Company) was adulterated in that it consisted in part of a filthy, decomposed and putrid animal and vegetable substance and misbranded because the curative claims were unwarranted. Seawright Water (Seawright Magnesians Lithia Spring Company) was adulterated in that it consisted in part of a filthy and decomposed vegetable substance (Jour. A. M. A., July 24, 1920, p. 261.)

Benzyl Benzoate.—The chemical properties of benzyl benzoate have been known for years. Its therapeutic properties as an anti-spasmodic have been known only a short time. Before this new addition to our materia medica can be given thorough clinical trial, it is necessary that the products be of a quality sufficiently pure for medicinal use. For the physician's protection, as well as for an aid to the manufacturer, the A. M. A. Chemical Laboratory, at the request of the Council on Pharmacy and Chemistry, has elaborated purity standards. It has also examined the market supply and found that, on the whole, the nonproprietary medicinal brands are of a satisfactory grade for clinical use (Jour. A. M. A., July 31, 1920, p. 335).



# The Treatment of Syphilis of the Central Nervous System\*

Clyde L. Cumber, M. D., Cleveland

**Editor's Note.**—It is axiomatic that the best treatment of any form of syphilis is its prevention. The second essential is the intensive care of those who are infected in the early stages of the disease. The treatment of every case of lues, in the opinion of Dr. Cumber, should be pushed as vigorously from the start as though invasion of the cerebro-spinal axis by the spirochetes were a demonstrated fact. No one can predict the amount of treatment a given case will require to effect an actual cure but treatment not begun until the late secondary period should be continued for at least three years. This is an optimistic minimum. The physician who claims to make a quick cure will be beset invariably with a goodly number of disappointed victims, who show recrudescence in some form. It is regrettable that examination of spinal fluid is not resorted to more frequently to detect cerebro-spinal invasion, as it is becoming a more and more established fact that many a tabetic shows a negative blood Wassermann test whose spinal fluid shows positively the presence of syphilis.

IT IS my desire to present certain fundamental considerations in regard to the treatment of syphilis of the central nervous system. The wide scope of this subject is obvious; and the limited time I have at my disposal permits only a brief summary of salient features. *In the first place it is always true that the best treatment consists in prevention.* This general dictum can not be emphasized too strongly in speaking of syphilis because every case is potentially one of cerebro-spinal syphilis. For the benefit of organized society, it is hoped that the public health measures which have been instituted within the last few years as part of the nation-wide campaign to control this disease, will bring results and will diminish the rate of incidence, because it is certain that a considerable proportion of syphilitics eventually must show degenerations in the central nervous system. The disastrous effects to the unfortunate individuals, measured in terms of diminished usefulness and lost capacity for enjoyment, and the expense inflicted upon society by the incapacitated, require no elaboration.

## EARLY DIAGNOSIS AND TREATMENT

*The second fundamental consideration is the care of individuals who come under medical observation in the early stage of their infection.* It is they who give us our opportunity for real service. The public is now rather generally informed as to the possibility of late sequels, so that the great majority of those infected will meet their share of the obligation in taking vigorous and long-continued treatment if we do our share in explaining to them the necessity for it. We must continually place before the patient the relative efficiency of treatment in the early months as compared to the slow response in later years. *The treatment of every case of lues should be pushed as vigorously in the early stages as though invasion of the cerebro-spinal axis by the spirochetes were a demonstrated fact.* Indeed, it is well recognized by syphilographers that this invasion often does take place during the second-

ary period, even when clinical symptoms referable to the nervous system are absent. The early institution of treatment, however, necessitates early diagnosis of every case of syphilis. Laboratory measures certainly are not utilized to their fullest extent at the present time, and many cases are allowed to drift along without diagnosis simply because the suspicious sore has not been carefully examined by suitable methods. The detection of spirochetes and the Wassermann reaction on the blood give us invaluable assistance which should be universally employed.

## EVALUATING THE EFFICIENCY OF TREATMENT

Our views regarding the amount of treatment necessary to effect a cure have undergone many revisions in the past fifteen years. We all remember the false hopes which Ehrlich's discovery first aroused; that a specific had been found, one dose of which would free the body of infection. It has taken years for the laity, and even for some of our own number, to correct this idea. While few accept it as stated, the impression still clings that two or three doses of arsphenamine and some mercury, regardless of the way in which it is given, are sufficient. This too, is regrettably far from the truth. *No one can predict the amount of treatment a given case will require in order to effect an actual cure, but we now realize that when treatment is not begun until the late secondary period, it must be continued for at least three years. This is an optimistic minimum.* The physician who promises a cure in three months or six months comes dangerously close to charlatanism, for while early results may apparently corroborate his claims, he runs the chance of being confronted, in his later years, with a goodly number of disappointed victims who show recrudescence in some form. Incidentally, the chance that a single injection of arsphenamine may be more harmful than helpful, is far from remote as is shown by the occurrence of so-called "neuro-recidives."

To give the standards which are today deemed as requisite for evaluating the efficiency of treatment, would be out-of-place, but it is entirely pertinent to say that no case should be discharged from treatment as cured, until the spinal fluid

\*Read before the Medical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

has been subjected to laboratory examination.

#### DETECTION OF SYPHILIS OF THE CENTRAL NERVOUS SYSTEM

The *third aspect of the problem* is the detection of syphilis of the central nervous system. It would be difficult to give a brief description of its numerous and diverse symptoms. This diversity is well understood when we remember the varieties of pathological lesions which are encountered, i. e., meningitis, endarteritis, gummatous infiltration, parenchymatous degeneration and the later atrophic changes in the cord. Added to this is the fact that inflammatory and degenerative lesions may occur anywhere in the cerebro-spinal axis so that the resulting disturbance of function may project itself to any part of the body. Some of the prominent symptoms are persistent headaches, insomnia or somnolence, disturbances of sensation, impairment of memory, lightening pains, girdle sensations, vertigo, inner ear deafness, double vision, incontinence or retention of urine and impairment in sexual power. This list includes only a few of the symptoms which may be presented. Seldom are all of them seen together, and suspicion should be aroused when the patient complains of one or more of them. Were they regarded as signals pointing to the need of careful clinical and laboratory investigation, the all-important diagnosis would be made much more frequently. There is, of course, a different grouping of symptoms in the principal varieties of syphilitic disease of the central nervous system (paresis, tabes dorsalis, meningo-endarteritis, etc.) but we shall consider them for practical purposes as they have been presented. Indeed, in many individuals, it is difficult to differentiate between these forms, e.g., between paresis and acute syphilitic meningitis. Often a conclusive opinion can be formed only after prolonged observation.

#### ADEQUATE EXAMINATION

An adequate consideration of the physical findings would require a lengthy treatise. A routine *physical examination* should include the observation of the pupils for inequality in size, irregularity in outline or disturbances in the reaction to light; the exaggeration or absence of knee and ankle jerks; and the presence or absence of a Romberg sign, and a *neurological examination* should include at least a detailed study of sensations, co-ordination, and muscular power. When either the history or physical findings arouse suspicion, the laboratory should be used without hesitation even though the clinical evidence be indefinite. *It is regrettable that spinal fluid examination is not resorted to more frequently.* Altogether too great dependence is placed on the results of the blood Wassermann reaction since many accept them as final. The fallacy of depending merely on the Wassermann reaction on the blood should be emphasized. Too frequently cere-

bro-spinal lues is excluded from diagnostic consideration simply because the blood Wassermann reaction was negative. This, of course, is a grievous error. *We know full well that many a tabetic shows a negative blood whose spinal fluid show positive results.* The following examinations should be carried out on the spinal fluid: cell-count, Wassermann reaction, test for globulin and Lange reaction. The cell-count gives some indication of the activity of the meningitis. The Wassermann reaction, if a positive be given by extremely small quantities, points to the presence of paresis, though complete reliance should not be placed upon this as a differential test. For the purpose of differentiation, the Lange reaction is apparently much more useful, but even it does not give final information.

#### THE QUESTION OF TREATMENT

Once diagnosis has been made, the question of treatment arises. As great as have been the advances in anti-syphilitic therapy in recent years the problem of treatment of cerebro-spinal manifestations is not yet satisfactorily solved. To be sure, we are able to arrest the degenerative process in many more cases than we were formerly; we are able to afford symptomatic relief in many others; but our present methods still fall short of the desired optimum implied in the word cure. Even our most favorable results would be better described as arrested cases. Indeed, it is doubtful if this ideal of absolute cure can be attained. The inaccessibility of the inflammatory areas in many portions of the brain and cord to drugs borne by the circulation, and the irreparable degeneration of nerve tracts after inflammatory processes of any extent and duration, are two important factors which add to the difficulty. We are brought face to face with the proposition we have stated before, proper treatment of cerebro-spinal lues consists in its prevention. *The earliest treatment of a case in the early secondary stage should be as intensive as it would be, were signs of neurological syphilis present.* When this ideal has not been realized, the next line of defense is to recognize the invasion of the central nervous system at the first possible moment. The prompt recognition of cerebro-spinal syphilis, therefore, is not something of mere academic interest. It is something of the utmost practical importance to the patient, because when the diagnosis is made early enough and efficient treatment is instituted immediately, much damage can be prevented and there is often an excellent opportunity of arresting the process. On the other hand, a delay of a few months in cases of active meningo-endarteritis may permit permanent damage.

The following methods of treatment are at our disposal; mercury aided by potassium iodide; intensive intravenous use of arsphenamine; and the intraspinal use of arsphenaminized serum. Mercury is useful, but it has definite limitations.



It should always be given a trial, and while the results may be excellent, they are often inadequate and disappointing. Complete reliance should not be placed upon it, since the process may advance steadily even under its vigorous use. In many instances, the maximum amount of improvement is seen with the intensive intravenous use of arsphenamine. By intensive use we mean injections given at intervals of seven to ten days in course of six or eight injections, alternating these, when possible, with potassium iodide and mercury inunctions or injections. Many patients obtain complete relief of the lightning pains, great improvement in general health, and general arrest of the inflammatory process as indicated by the improvement in the laboratory findings. A regimen composed of courses of arsphenamine alternating with courses of mercury and potassium iodide, may represent all that is required in the way of active treatment. For a certain residuum of cases, however, this method of attack is far from sufficient. Many individuals are unable to tolerate it. With others who are, excruciating pains are still experienced in spite of most intensive application, general health is greatly impaired, indeed all the symptoms progress rapidly while the sufferers regress from partial incapacity to complete invalidism. In these cases, the patients should be given the benefit of intraspinal therapy. The chief disadvantage of intraspinal treatment is that it requires a certain amount of technical skill. Our experience shows that it is not accompanied or followed by unfavorable results when arsphenaminized serum is given and the proper technic is employed. The efficacy of the method has aroused a considerable amount of discussion; a review of the literature shows that it is still a moot question. We have, however, followed cases for about seven years, and have reported the results from time to time. *As judged by clinical observation and by repeated laboratory examinations, we feel that for many patients intraspinal therapy offers distinct hope. Whatever treatment be employed, the same rule should hold; dogged persistence in treatment on the part of both the sufferer and the physician are absolutely vital to success.*

#### PROGNOSIS

Paresis is as hopeless now as it has always been. A knowledge of pathology makes this clear at the start. Intradural and intraspinal therapy can show no better results than periods of temporary improvement; even these may be merely the remissions which are seen in untreated cases.

What of prognosis? The question has been partially answered. The outlook depends greatly upon the extent and duration of the process. An active meningitis, taken early, may be arrested with complete restoration of function. With extensive endarteritis, the future will depend upon whether or not there be hemorrhage into im-

portant areas. In tabes dorsalis, it is the rule rather than the exception to be able to relieve dorsal root symptoms, such as lightning pains. The early cases often do extremely well, but those seen late, after atrophy of the posterior columns has ensued, are usually rather hopeless. When spastic paralysis is present, treatment offers little hope and it is unwise to give much encouragement.

#### SUMMARY

To summarize, we may recapitulate the points in the reverse order. Treatment is at best uncertain. In the most favorable cases it must be intensive and protracted; in some manifestations, it may be utterly powerless. Success depends upon the early institution of treatment. On account of this, prompt recognition of invasion of the central nervous system is vital, so that irreparable damage may be prevented. It is even more important, however, to prevent cerebro-spinal sequelae by treating all syphilitics vigorously and by keeping them under observation until clinical and laboratory examinations prove that the infection has been eradicated in the nervous system as well as elsewhere. On account of the certainty that many syphilitics will inevitably develop cerebro-spinal lues in spite of every precaution, it becomes all the more important to lend our aid in fighting this great plague.

605 ROSE BUILDING.

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*Benzyl Benzoate—Abbott.*—A brand of benzyl benzoate (see New and Non-official Remedies, 1920, p. 49) complying with the N. N. R. standards. It is also supplied in the form of Elixir Benzyl Benzoate—Abbott and Benzyl Benzoate Tablets—Abbott 2 grains. Abbott Laboratories, Chicago.

*Echitone and Echinacea.*—A circular entitled "Skin Lesions of Unknown and Uncertain Origin" sent out by Strong, Cobb & Co. is devoted to the exploitation of "Echitone," stated to contain echinacea, blue flag and pansy. Several years ago, the Council on Pharmacy and Chemistry examined "Echitone" and rejected the product because unwarranted therapeutic claims were made for it and for other reasons. The drug echinacea has been claimed to be a "specific" for rattlesnake bites, syphilis, typhoid, malaria, diphtheria and hydrophobia. It has also been credited by enthusiasts with curative effect in tuberculosis, tetanus and exophthalmic goiter, and with the power of retarding the development of cancer. The Council on Pharmacy and Chemistry examined the claims made for this drug and reported that there was no reliable evidence in substantiation of the claims made for it. Echinacea is one of the many vegetable drugs introduced by the eclectics without a rational basis for their use (Jour. A. M. A., July 17, 1920, p. 193).

# Intra- and Extra-Dural Optic Nerve Tumors and their Surgical Management\*

Horace Reid, M. D., and Robert Sattler, M. D., Cincinnati

**Editor's Note.**—Dr. Reid presents a very interesting case report of a patient coming to operation for a malignant extra-dural endothelioma, based on the evidence of a careful macroscopic and microscopic examination of the mass and a consideration of its classification in accordance with the current conceptions of the best pathologists. Dr. Sattler adds a report on the surgical management of this case and details several important news ideas in technique not only to facilitate the removal of such a tumor but to render the cosmetic result far more acceptable. The report will be appreciated particularly by those who are apt to encounter similar cases.

**A**N examination of the literature pertaining to the occurrence of tumors in the optic nerve, leads to the conviction, that these pathological conditions are not very frequent. And, inasmuch as the great majority reported have been those in which there was an overgrowth of the fibrous tissue elements, and definitely *intra-dural* in location, a short review of the literature and a report of one case of *extra-dural endothelioma* may be justifiable.

## PATHOLOGICAL CLASSIFICATION

In the pathology of these tumors of the optic nerve, growing within the sheath, we have two main classes. *First* those of a more or less benign character, slow growing and developing from an overgrowth of the fibrous connective tissue elements of the nerve; and here we may find every stage of fibrous tissue growth from the embryonic connective tissue to the hard fibrous masses. It is to this general class that Byers has given the name fibromatosis. To this class belong 95 per cent of the primary optic nerve tumors. Collins and Mayou, ("Pathology and Bacteriology of the Eye"), classify the most common tumor of the optic nerve as a neurofibroma. A. C. Hudson (Ophthalmic Hospital Reports) designates these tumors as gliomatous degenerations.

In the *second* class, we place those tumors, in which there is a proliferation of the endothelial cells. These are the endothelioma. They are farther divided into the *intra* and *extra-dural*, although the classification thus appears to be one of degree. The *intra-dural* tumors have as a capsule the dural sheath. The *extra-dural* develop from the endothelial cells lining the dura or the blood vessels.

The *intra-dural* endotheliomas are not as common as those belonging to the *extra-dural* class. Parsons classifies three-fourths of all *extra-dural* tumors of the optic nerve as endothelioma, the remaining as being sarcomatous. They are slow in growth but are more rapid than the *intra-dural*, perhaps due to the absence of the retaining dural sheath. Lawson reports a case of metastasis after the removal of an *extra-dural* tumor, although this has been questioned.

The secondary tumors of the optic nerve, sarcoma and glioma of the retina have not been considered, nor have gliomas of the nerve itself.

The optic nerve tumors generally make their appearance before the 20th year. They are slow growing; and are associated with gradual loss of sight and exophthalmos of a moderate degree, usually in the line of the orbital axis. The degree of exophthalmos is no index to the size of the nature of the growth. The average duration of 216 cases, reported by Hudson, was from 3 to 4 years from time patient first noticed symptoms. There is as a rule very little limitation of the extra-ocular movements. Palpation reveals very little and can not be relied upon. With the ophthalmoscope we first find optic neuritis with venous engorgement, then atrophy. If growth has been slow the retinal vessels are still present and of practically normal size, showing that collateral circulation has taken place. Fifty per cent. of these tumors have not been completely removed at the apex where they are continuous with the optic nerve, as it passes through the optic foramen, yet local recurrences are rare. They are more apt to follow the incomplete removal of an endothelioma than of the fibrous tissue tumors.

## CASE REPORT

**Case 1.**—Miss N. N., aged 39, Richmond, Ind. Complaint, blindness of the left eye. Family history negative for tuberculosis and cancer. Personal history, patient had always been healthy and never had any symptoms that we could associate with an intra-cranial lesion, such as headache, slow pulse, nausea or vomiting. The venereal history was negative. There has never been any vertigo or diplopia. No muscle paralysis. Reflexes were normal.

*Onset of present condition* was in the fall of 1911, when the patient began to notice an impairment of vision. She went to a local oculist but was not relieved by lenses. Her vision gradually became worse. She consulted Dr. Sattler in 1915. At that time her vision in the left eye was .5. A diagnosis of partial optic nerve tumor was made.

There was a moderate exophthalmos of the left eye straight forward, with a tendency to deviate down and out. Movements down and in were slightly restricted. The retinal vessels were small and the iris did not react to light or ac-

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.



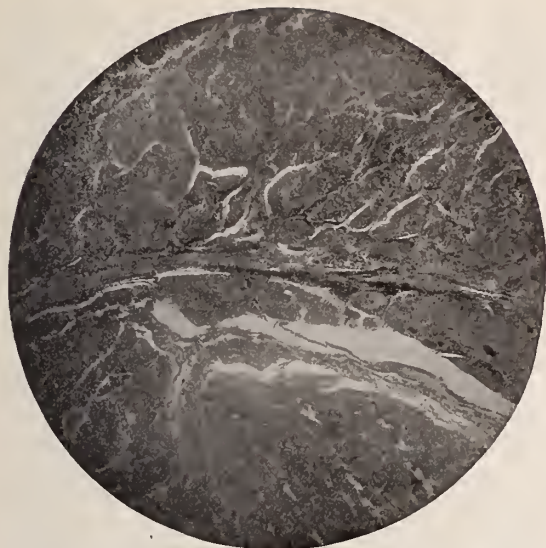


Figure 1. Microphotograph (x 64) of a cross-section of tumor mass, showing the nerve below with pial sheath above. Tumor invading the dura.



Figure 2. Microphotograph (x 64) of longitudinal section of tumor, showing nerve which was not involved by the tumor. Pial sheath shows as a black staining line.



Figure 3. Microphotograph (x 64) to show the general character of the tumor. It shows alveolar arrangements and concentric masses of endothelial cells separated from one another by connective tissue stroma.

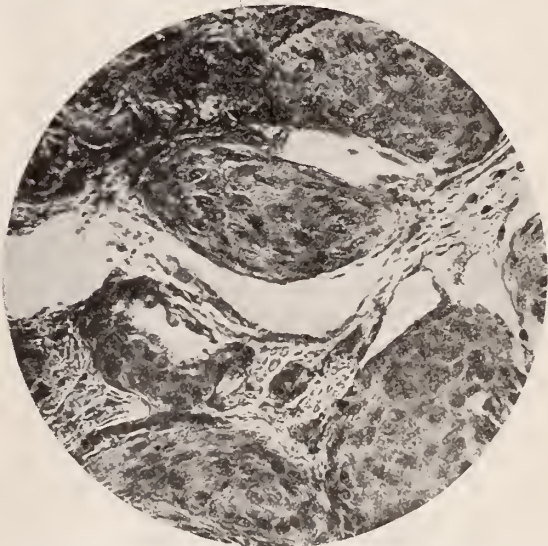


Figure 4. Microphotograph (x 1028) of section of tumor to show general character of the cells composing the tumor mass.

commodation. There was no ulceration of the cornea. Examination of nose and sinuses was negative. Operation was advised but patient refused.

A short time after her visit in 1915, she began to have headaches which were partially relieved by pressure over orbit. Then, in the early part of 1916, she consulted an oculist in Chicago, who gave her a course of iodides and pilocarpine sweats without relief. Later he advised removal of the eye.

During the next four years she suffered very little pain. The proptosis had gradually increased. In October, 1919, while convalescent from an acute attack of appendicitis, the patient

had a sudden protrusion of the eye. The lids were blue and could not be closed over the globe. Dr. Sattler was called in to see the patient. He found this marked degree of exophthalmos in line of the orbital axis, slightly down and out. The lids had practically strangulated the eyeball. The patient was blind in the left eye. Dr. Sattler advised immediate operation, on account of physical discomfort, and it was performed without delay.

The technique of operation was slightly different from the Kroenlein or modified Kroenlein, or the Knapp operation. I shall omit detailing it in this brief report of the case as Dr. Sattler will describe it in his discussion which is to follow.



## PATHOLOGY

*Macroscopic examination of the tumor:* Weight 13.7 grams. Width 3 c. m. Length 3.7 c. m. Thickness 2.4 c. m. Volume 12 c. c. m. It is of a dense firm consistency and fills practically the whole orbit. There is a shallow saucer-like depression, into which the eyeball fitted. The sclera was loosely attached to the tumor mass. The posterior portion was cone-shaped and extended back to the optic foramen, where it had been cut through, so it must have been continuous with an intra-cranial portion, covering the posterior and lateral portion, there were a few fibrous adhesions. On section the optic nerve appears to be compressed; and runs throughout the whole tumor mass. There are no areas of softening. The whole substance of the tumor is of firm consistency. Tenon's capsule or muscles can not be recognized as such.

*Microscopical examination:* Aside from an infiltration of small round cells of an endothelial type, the optic nerve appears normal. With Weigert's stain it shows degenerated nerve fibers.

The pial sheath appears normal. The subdural space is obliterated. The dural sheath is intact, however, in some sections the whole dura is infiltrated by the tumor mass, and one section showed tumor mass lying next to pial sheath. The tumor proper is made up of multiple large and small concentric masses of whorls of endothelial cells. These are of various shapes, as spherical, elongated and irregular. In the center of some of the whorls the endothelial cells have undergone necrosis. In the others we have the masses enclosing hyaline fibrils. The intervening tissue is of ordinary spindle shaped connective tissue type. At the periphery there is no definite capsule. The blood vessels are few and there is no endothelial proliferation within their walls. There are no areas of softening or calcification. Tenon's capsule can not be recognized.

From a pathological side I believe that we would be safe in classifying this tumor as a malignant extra-dural endothelioma using Parson's classification of extra-dural tumors, of which he was able to find nine cases. Clinically we can classify them as benign.

The patient was last seen the early part of May this year. There has been no evident local recurrence. General physical examination was negative. The eye is turned up and out held fixed by adhesion. There is no ulceration of the cornea. The iris does not react to light, but dilates with homatropine. The retinal vessels are visible and one-half normal size. The fundus shows degeneration of the retina and choroid, the disk was pale white and atrophy.

(DR. ROBERT SATTLER)

**A** MORE successful surgery can be claimed for this comparatively small division of optic nerve tumors, than for any other among the host of neoplasms invading the var-

ious structures of the orbital cavity. This implies speedy relief from unsightly deformity and physical discomfort, together with the probable conservation of a blind eyeball. As the present case substantiates this statement, a more complete description is added of the surgical methods which may accomplish this.

A deliberate and discriminate finger exploration to discover or disprove the presence of a tumor mass within, or encroaching upon the funnel of the recti muscles, or of any definite pathologic enlargement of the orbital division of the optic nerve, should in every case of this class, precede radical surgery.

My own experience has long ago led me to depart from placing the opening for this exploration and more radical surgery which must follow, in the depth of the lower and outer fornix of the conjunctiva, in most cases further supplemented by division of the outer canthus, and detachment of the external rectus muscle and its subsequent re-attachment, should disclosures justify the assumption, that a blind globe could with reasonable certainty be conserved. Instead, the palpebral fissure is first securely closed by three strong silk sutures and the opening for an eminently more facile and unhampered exploration made in the lower third of a Kroenlein or Czermack incision. The orbital fascia is opened close to the bony margin and the fat which extrudes and more which can with gentle pressure against the eyeball be made to do so, abscised. The right index finger is now introduced along the outer floor of the orbit between the corresponding external and inferior recti muscles and if an abnormal enlargement of the nerve trunk or other distinct new growth is discovered, a second opening, at a point opposite and near the inner and lower cutaneous and bony margin of the orbit, is at once added. After abscission of extruding fat the index finger of the left hand is introduced. The joint exploration with two fingers from opposite directions enables one with the elastic and yielding support of the protected eyeball and securely sutured eyelids to make a deliberate and eminently more satisfactory examination. This can be followed up by a careful blunt or finger dissection and directs at once the radical surgery which may be necessary, i.e., the re-section of the optic nerve as close to its entrance into the orbit as possible at or near the optic foramen and its detachment close to its passage into the eyeball. The clamped distal end of the neoplasm is now dragged into the incision which has been sufficiently enlarged to meet any emergency for an easy exit of the tumor mass and without adding osteo-plastic interference after Kroenlein or the more complicated and extensive one of Czermack's method, can be readily exposed to unobstructed view and palpation and its attachment or proximity to the eyeball determined, followed by a deliberate and easy dissection and detachment of the ocular end of the



optic nerve at or near its passage into the globe. This is followed, after hemorrhage is controlled by the transplantation of a large mass of fat from the gluteal or other region. The orbital fascia is sutured and the external wound closed.

#### THE TWO GROUPS OF NEURO-FIBROMATA

Two groups sufficiently distinct both clinically and pathologically are commonly recognized as belonging to this category of rare optic nerve tumors. The first, numerically greater has been designated as *Intra-Dural Neuro-Fibromatosis*, neuro-fibroma, sarcoma and, for the reason of the uniform and unmistakable pathologic interpretation of many pathologists, (Parsons, Byers, etc.) as endothelioma. The second smaller group of which the present pathological specimen is a typical example, is termed *Extra-Dural Optic Nerve Fibromatosis*. The histologic characteristic of this specimen also places it among the endothelioma, on the testimony of several pathologists to whom it was submitted for examination and interpretation (Prof. Woolley, Dr. Fletcher Langdon, etc.).

I will add only a brief account of the points of practical interest pertaining to the case which Dr. Reid's succinct report describes, of the clinical history and pathological examination of this typical specimen of extra-dural optic nerve fibromatosis which the exploratory operation enabled us to discover, and to plan and also to effect its successful removal.

#### FURTHER SURGICAL POINTERS

The initial opening for exploration at the outer, lower temporal border of the orbit disclosed the presence of a hard ovoid or pyriform enlargement in snug apposition with the globe and which extended backwards and completely filled the apex or terminal portion of the orbit. The tissue fusion was so firm that a second opening, at a point opposite to the first, at the lower and inner border, was at once resorted to and with the combined aid of two hands for digital palpation and finger dissection, at once proved its superior advantage. Owing to the dense tissue fusion of the tumor and adjacent tissues this was supplemented in the depth of the cavity with blunt dissectors with one finger in one or the other exploratory opening until the extreme bony limitation of the orbit was reached and a clean sweep of the tumor mass near the optic foramen was made possible. The deepest extremity was then caught in the grasp of a long angular tipped tonsil clamp and with a finger on the nasal side as a safer guide, and a strongly bent pair of enucleation scissors, the tough and much thickened mass was detached at or near the extreme apical region of the orbit. The entire tumor was then brought into fuller view for inspection and palpation through the enlarged external incision and its subsequent detachment from the eyeball easily accomplished. This was followed by the

transplantation of a large mass of fat from the gluteal region, the orbital fascia united and skin incision closed in the usual manner. An uneventful recovery followed under the guidance and watchful interest of Drs. Holland and Churchill of Richmond, Indiana.

#### POST-OPERATIVE RESULT

The patient, Miss M., reported in person about six months after the operation. The left palpebral area appeared slightly sunken as though she was wearing a small artificial eye. The vertical diameter of the palpebral fissure was about  $\frac{1}{3}$  smaller than that of the opposite or right eye. She had regained more lid power than was surmised, as it could be assumed that the levator palpebrae superioris had probably shared the same fate as the recti muscles and had undergone a complete tissue fusion with the tumor mass or had also been completely severed with it.

The enophthalmic appearance of the eye was not marked and though little mobility of the globe was possible it was wholly free from even the slightest local irritability or discomfort. The patient herself was much pleased over the appearance of the eye and freedom from local discomfort and over the successful conservation of an intact eyeball with only a minor degree of deformity.

#### SOME PATHOLOGICAL AND CLINICAL CONSIDERATIONS

The present case has much in common with and adds to the confirmation of known and accepted clinical and pathological facts of optic nerve fibromatosis. This category of optic nerve tumors, comprises two groups or extra and intradural neuro-fibromatosis with apparently only minor pathological distinctions. The starting point of both is in the dural envelope of the optic nerve; in the smaller group a long latent or dormant congenital activity is suddenly or mysteriously aroused and proceeds inexorably from *within out*, and in the larger group, the in growth of trabeculated fibrous tissue is from *without in*. Both are pathologic illustrations of the same process which result in compression and extinction of optic fibers. These tumors incarcerate tissue of mesoblastic origin or endothelial cells which leads to but one interpretation of their pathological anatomy as endotheliomata with the attribute of local malignancy.

*Clinically*, however they show neither a malignant character nor a tendency to metaseses and the disclosures of the present case both so far as the pathological examination of the specimen and clinical history are concerned, support this statement.

Furthermore, it suggests as probable that optic nerve fibromatosis is in kind and degree, part of or morphologically related to a similar independent, often dissiminated, but more frequent intra-cranial dural fibromatosis. We must ascribe to it the same unknown congenital origin

with a similar apparent longer or shorter latent or dormant activity and that at any life period after birth its slow but inexorable growth activity will terminate in hopeless destruction of the neural elements which impede or resist its increasing displacement. On the part of the pituitary region this is in striking evidence for neoplasms in physical characteristics and path-

ological anatomy, like the intra and extra-dural ones of the optic nerve with an equally latent and long inexorable growth, accompanied by erosion of the sella turcica with partial or complete destruction of glandular activity with or without acromegaly and other typical clinical features of pituitary compression and partial or complete extinction of function are on record.

## OHIO PUBLIC HEALTH NOTES

Physicians of the Cincinnati health department found 34,064 school children in need of some form of medical treatment during the last school year, according to a report recently published. Out of this total 11,249 children recovered from the physical defects from which they were suffering; 1,491 either refused treatment, withdrew from treatment after it was started, or left the city, and 21,324 cases are still pending. The statistics cover both the public and parochial schools, 114 in number.

—Dr. J. B. Poling has succeeded the late Dr. A. L. Jones as health commissioner of Lima at a salary of \$3,000 per year. Dr. Poling formerly served as assistant commissioner.

—One result of the Cleveland health survey was evidenced by the establishment during August of a neurological and mental disease dispensary at Lakeside Hospital. Dr. C. W. Jones is in charge, assisted by Dr. A. D. Finlayson of Vanderbilt Clinic, New York; Dr. S. C. Lindsay, former division psychiatrist in the Army, and Dr. L. R. Ravitz, who established and maintained a mental hygiene clinic at Mt. Sinai Hospital.

—The Columbus Anti-Tuberculosis Society will establish new offices in September, providing increased facilities for carrying on the work of the organization.

—A children's health show, in which children were examined and the parents advised how to correct infantile physical deficiencies, was a feature of a Pure Food and Household Accessories Exposition held in Cincinnati August 3 to 15. Dr. A. G. Kreidler and Miss Abbie Rober's of the Mohawk-Brighton Social Unit headed the staff of physicians and nurses in charge.

—A second trachoma clinic was held in Midletown recently by Dr. John McMullen of the United States Public Health Service, assisted by members of the staffs of the state and local health departments. During the first two and a half hours in which the clinic was open more than 70 persons of all ages presented themselves for examination.

—Contagious diseases were on the increase in Cleveland in July. The largest notable increases were recorded for tuberculosis, of which there were 136 cases, and whooping cough, 112 cases.

Typhoid was the only disease to show a decrease, there being eight cases reported against the usual average of 21 for that month.

—Dr. J. W. Donaldson has been appointed health officer of Marietta on a part-time basis at a salary of \$100.00 per month.

—Announcement has been made that the Babies' Dispensary maintained by the Order of Eagles in Springfield will be kept open throughout the year instead of only in the summer months as originally planned. The dispensary is said to have done effective work in reducing the death rate among infants and educating mothers in the proper care of children.

—Akron's health program for the coming year, as outlined by Health Officer Nesbitt, includes the establishment of a dental clinic and extensions in the food, sanitary and school inspection services. The opening of several new school buildings will necessitate the addition of ten or fifteen new nurses to the school inspection staff.

—Dr. E. V. Berry of Newcomerstown assumed his duties, July 27, as health officer of Tuscarawas County.

—The Erie County health department has requested the assistance of club women of that county in following up defects in children disclosed through school inspection. The women are asked to report the names of children known to be afflicted in any manner and needing medical service.

—Under an order issued recently by the Dayton safety director, physicians in that city who have identification emblems on their automobiles are permitted to pass through parade lines at all times.

### Palestine Medical Journal

Palestine's first medical journal, "Harefooh, (Medicine), has just made its appearance, published by the Jewish Medical Association of Palestine. The journal is a quarterly and its first issue is dedicated to the memory of the Jewish physicians and nurses, who "lay down their lives in the years of upheaval in the Holy Land."

The objects of the medical association, as outlined in the quarterly, are to strengthen and coordinate the medical forces of the country and to collaborate with doctors outside Palestine; to give the medical work a national as well as a humane value; to prepare a native soil for Jewish scientists; and to help in the creation of the Hebrew University.



## Concerted Effort Being Made by Cultists to Deceive Prospective Members of Next General Assembly.

Fads and fad makers flourish for a time, at least. With the present spirit of unrest permeating the body politic a certain proportion of the public is prone to try anything just so it is "new" or "different."

This tendency is exemplified in the spirit of "ouija addiction," Christian Science, so called, the belief or rather uncertain hallucination concerning the immateriality of disease, or the cult which claims to prevent and cure disease through elimination of its "cause" through external manipulation.

Following the defeat of the non-medical or chiropractic bill at the last session of the legislature attended by its bribery scandal, these cultists have secured a large fund to promote their "cause." Extensive newspaper advertising and other propaganda is being disseminated by them. At a recent meeting of the so-called "Ohio Chiropractic Association" in Akron, emphatic declarations were made to the effect that the chiropractic bill to be initiated, and petitions for which have been secured during the past months, would be enacted by the next legislature.

Prior to the August primaries communications were sent by the chiropractors to a number of candidates for state offices and for the legislature requesting a declaration of their "stand with regard to chiropractic issues." These communications were accompanied by questionnaires.

Following the selection of party candidates at the recent primaries, similar communications and questionnaires are being sent to the candidates who will be voted on at the November election.

Quotations from one of these communications read:

"The Chiropractors for some time have been striving to secure legislation that will raise their standards and be a protection to the people and to themselves, so they would not be subservient to antagonistic interests.

"A law is now being initiated and will be put before the next Legislature to grant the Chiropractors an examining board of their own to license and examine those Chiropractors who are qualified to practice Chiropractic in this state."

The questionnaire accompanying these communications comprises three questions as follows:

"1. Will you support legislation, if elected, that will grant to the Chiropractors a board of their own out of their own profession?"

"2. Will you support legislation that will give the people the right to choose their own physician?"

"3. Will you support legislation that will prescribe reasonable qualifications for Chiropractors in order to be able to practice here in this state?"

Obvious enough to those who understand the situation is the misleading character of these questions. Even honest, fair-minded and conscientious candidates not familiar with problems of public health and medical practice might easily be misled. The first question cannot properly be answered by yes or no unless the candidate gives the subject thorough consideration. He should be informed that present laws provide for the licensing of those in limited practice under quite reasonable requirements.

The second question is equally misleading for the people already have the right to choose their own physician. As to the third question, the entire reply depends on the interpretation of the word "reasonable."

The whole situation indicates an attempt to undermine medical science, to belittle thorough research, to endanger public health and to exploit sickness by those who have no other purpose than to deceive suffering humanity for their own private gain.

As an indication of the organized avarice and even lawlessness of the cult, the Journal of the American Medical Association in a recent issue exposed the purposes and practices of the so-called "Universal Chiropractors Association."

While this article was perhaps read by a great many of the members of the medical profession in Ohio, it is so interesting and illuminating that it is reproduced in full below:

### THE FOUNTAIN-HEAD OF CHIROPRACTIC; WHAT OF ITS PRODUCT?

The Palmer School of Chiropractic advertises itself as "the fountain-head" of chiropractic. The following will give some intimation in regard to the character of the "stream" that comes from it:

The 1920 annual announcement of this school states that students are taught not only "how to act with patients in and out of the office" but also "how to successfully advertise." From the beginning, therefore, methods are taught which, from the time of Hippocrates, have been looked on as quackery. It is also stated that the students complete their "freshman" "sophomore," "junior" and "senior" courses in four months each, or altogether in sixteen months. In another place the reader is informed that, in case the student finds it impossible to remain for more than twelve months, the school will, nevertheless, confer on him the degree of D.C. (Doctor of Chiropractic). By remaining at the school six months longer he would be granted an additional degree, that of Ph.C. (Philosopher of Chiropractic), if he got "an A grade on each and every paper submitted."

The statement that a "common school" education is required for admission may mean nothing

ing more than the bare ability to read and write. Granting, however, that it is the equivalent of the eighth grade in the public schools, the professional training, according to the usual methods of calculating standards in general education, would be considered of no higher grade than that of one or one and a half years of high school work. This low entrance qualification is in marked contrast to the requirements for admission to medical schools in which students must have completed a four year high school course and in addition two years of work in a reputable college of arts and sciences, including courses in physics, chemistry and biology.

Another significant statement in this announcement is that a student "may matriculate on any week day." This indicates at once that no intensive course of study is given in this institution such as is required in medical schools. No student entering a medical school a week or more after the opening of any laboratory course (for example, histology, pathology or bacteriology) could possibly be able intelligently to carry on the work in such courses because of the large amount of work missed during the previous week's absence. Evidently, there are no such disagreeable handicaps in the study of chiropractic.

The announcement of this school states that in its "scientific course" the student is required "to attend" (note the exact figures) a total of 4,103½ class hours. This would be fifty-three hours a week for eighteen months, or eighty hours a week—twelve hours a day—for a calendar year. Education does not depend on the number of hours of instruction, however, so much as on the subject-matter taught and the ability of the instructor to impart knowledge. As a matter of fact, the requirement of *actual class-room* work in our highest grade medical schools in four college years of from eight to nine months each is only about 4,000 hours. Each class hour, however, presupposes from one to three hours of outside preparation so that, if measured by the claims of this chiropractic college, the total hours required by medical schools would be somewhere between 8,000 to 12,000 hours!

The textbooks used also are interesting. In anatomy, the text used is said to be that prepared by Mabel H. Palmer, D.C., Ph.C. (1905), the wife of B. J. Palmer, who is the president of the institution. Court reports in 1910 show that the latter had only a common school education and had never matriculated in any school, college or university, other than a chiropractic college. For those who never had a training in the scientific methods of treating the sick, an attempt to teach others how to do so is equal to "the blind leading the blind." Textbooks of their own writing are also used by the teachers in symptomatology, gynecology and chemistry, who likewise have no degrees in medicine. Incidentally, the sale of

these textbooks adds considerably to the revenue obtained from students.

Speaking of revenue besides the income from textbooks, this institution charges for its twelve or eighteen months' course a "spot cash" sum of \$300—more than a year's tuition last year in any of the highest grade medical schools of the country! If the fee is paid in "deferred payments," it is \$350. If a husband and wife, however, take the course the combined fee "spot cash" is \$375 or, if in "deferred payments," \$450. Reports of inspection of this school show that there are few, if any, all-time teachers. Such few laboratories as the school possesses are reported also to have the barest minimum of equipment. Most of the fees obtained, therefore, must be clear profit. This is in marked contrast with the teaching of scientific medicine in medical schools where the actual average expense of teaching a student each year is more than three times what the student pays in tuition fees!

The low ideals of the leaders of this cult are shown in the report of Mr. James Hodgins of Ontario issued a few years ago. B. J. Palmer himself is quoted as having stated that bacteriology was the "greatest of all gigantic farces ever invented for ignorance and incompetency" and that "the analysis of blood and urine is of no value." In this same report other leaders of chiropractic deride also the study of *materia medica* and chemistry and state they have "no earthly use for diagnosis." They place themselves, therefore, in direct opposition to Pasteur, Koch, Laveran, Flexner and others whose discoveries during the last half century have revolutionized the practice of medicine and saved countless thousands of lives! No wonder Justice Hodgins concludes that he could not bring himself "to the point of accepting, as part of the legalized medical provision for the sick, a system which denies the need of diagnosis, refers 95 per cent. of disease to one and the same cause, and turns its back resolutely on all modern medical scientific methods as being founded on nothing and unworthy even to be discussed."

But the teaching in this particular school has further interesting tangents. There is also "The Universal Chiropractors Association" with headquarters, evidently at this Palmer School of Chiropractic. At least, B. J. Palmer and Frank W. Elliott, the president and registrar of the Palmer School, are, respectively, the secretary, and the treasurer and business manager of the association. The members of this association—made up largely of graduates of the Palmer School—are promised protection from, and assistance in cases of, prosecution for violating the law in practicing chiropractic. According to the constitution, "The Association, except as herein otherwise provided, shall pay the fine and all costs in all prosecutions, civil or criminal, wherein any member of this class shall be charged in substance with having practiced medicine, sur-



gery, osteopathy, or other method of healing or dealing with the sick or afflicted without a license, or other legal permission, provided such member is in good standing and shall have conformed to the Constitution, By-laws and all Rules and Regulations of the Association."

The word "class" in this paragraph refers to "active members" who are described as "all chiropractors of good moral character graduated from or holding certificates of attendance from such chiropractic institutions of learning as are recognized by this association and are practicing specific, pure and unadulterated chiropractics without the use of adjuncts, etc."

The constitution and by-laws of the association are printed in a pamphlet of twenty-four pages, including two pages of instructions as to "What to Do If Trouble Starts." Among the fifteen items in these instructions the following are interesting:

11. Be conservative in your claims and be very careful that the enemy does not send any patients to you that they think will die on your hands or otherwise complicate matters. Do not, unless in a state or province where you are licensed, undertake to handle any so-called contagious diseases.

13. Have as many friends as possible present at your trial. Do not make any newspaper announcements without consulting your local attorney.

15. If trouble has not really started, but there are signs of it, let us hear about it by letter.

The graduates of this "school" are said to be practicing in Iowa—the institution's home state—in direct violation of the medical practice act and, according to the above, they are being encouraged to violate the law in other states.

From the foregoing statements it will be seen that the teaching conducted in schools of chiropractic is a menace to education and to public morals as well as to the science of medicine and to rational rules of public health. The conclusions justified by the evidence submitted are as follows:

(a) Leading chiropractors deride or disbelieve in such well known and proved sciences as chemistry, bacteriology and pathology. Their teachings are not based on fact and are refuted by the accomplishments of the great minds in education, research, science and medicine.

(b) Their attitude toward these sciences shows their lack of sympathy for the first essentials in the prevention of epidemics and the regulation of public health.

(c) They declare that education and the ability to make a diagnosis are not essential for the intelligent treatment of human diseases and injuries.

(d) Their schools at most require only a common school education, a training insufficient to

permit the student to undertake intelligently any but the most elementary course of study.

(e) Their course of professional (?) instruction is too short to enable the student to obtain a training in the sciences necessary for the intelligent or safe practice of the healing art by any method.

(f) The school teaches and encourages its students to advertise—which they are doing and using the same flagrant methods which have been employed by quacks since the beginning of medicine.

(g) Finally, the leaders of this cult openly urge their graduates to practice chiropractic in violation of the law, and have arranged through the Universal Chiropractors Association to aid and abet them in such outlawry.

### District Boards Must Provide Antitoxin

An interesting opinion rendered by Attorney General Price, July 29, ruled that county commissioners are no longer authorized to pay for diphtheria antitoxin furnished on the order of a health commissioner for use in indigent cases and that district boards of health under the Hughes-Griswold Act must provide for distribution of antitoxin for all diphtheria cases.

The Hughes-Griswold Act provides that "each district board of health shall provide for the free distribution of antitoxin for the treatment of cases of diphtheria and shall establish sufficient distributing stations to render such antitoxin readily available in all parts of the district.

The Attorney General held that the new law repealed by implication the former statute authorizing county commissioners to provide antitoxin.

A copy of the opinion has been sent to each district health commissioner and district boards of health have been advised to make immediate provision in their 1921 budgets for carrying out this section of the law.

In a statement commenting on the opinion, the State Department of Health called attention to recent reports of New York and Philadelphia Health authorities, whose statistics show that deaths almost never occur when antitoxin is administered on the first day of a diphtheria case, and that the percentage of deaths rises rapidly with longer delays. The value of antitoxin as a life-saving agency is also illustrated at Salem, Ohio, where in the ten years immediately preceding 1900 there were 448 diphtheria deaths and in the following ten years only one, the reduction being due to the adoption in 1900 of a system of free antitoxin distribution for all cases.

## DEATHS IN OHIO

*Charles Wesley Baker, M. D.*, Starling Medical College, Columbus, 1898; aged 67; died, August 1, from injuries sustained when the machine which he was driving was struck by a passenger train near Dennison, Ohio. Dr. Baker's wife and former Governor J. Frank Hanly of Indiana were also occupants of the machine and died of injuries received. Dr. Baker was a resident of Kilgore, Holmes County.

*William A. Cracraft, M. D.*, licensed 1881; aged 76; died at his home in Elm Grove, July 22, from complications. Dr. Cracraft was a veteran of the Civil War and had practiced in the Wheeling Valley for 53 years. In addition to his wife, he is survived by one son, Dr. William Cracraft, Jr., of Wheeling, West Virginia.

*Edward W. Crecelius, M. D.*, Cleveland Pulte Medical College, 1900; aged 49; member of the Ohio State Medical Association; died at his home in Norwalk, July 11. Death was due to tetanus which developed following an injury to a finger sustained while he was operating a potato planter. Dr. Crecelius began practice in Norwalk in 1900, and had practiced there continuously since that year. He leaves his widow and two daughters. Dr. William A. Crecelius of Sandusky is a brother.

*Johann Franz Dolina, M. D.*, University of Königsberg, Germany, 1889; aged 59; member of the Ohio State Medical Association, and Fellow of the American Medical Association; died in Miami Valley Hospital, Dayton, July 12. Dr. Dolina had practiced in Dayton for 30 years, specializing in diseases of the eye, ear, nose and throat. One daughter survives.

*Arthur L. Jones, M. D.*, Fort Wayne College of Medicine, Fort Wayne, Indiana, 1897; aged 49; member of the Ohio State Medical Association and Fellow of the American Medical Association; died, July 25, from angina pectoris, while motoring from Orchard Island to Lima. Dr. Jones located for practice in Lima immediately following his graduation. In 1906 he was appointed health commissioner of the city and has served in that capacity since that time, with the exception of 14 months spent at Camp Dix, New Jersey, during the war. He leaves his wife and three daughters.

*Carey M. Klyne, M. D.*, Eclectic Medical College, Cincinnati, 1894; aged 50; member of the Ohio State Medical Association; was drowned in Milton Lake, near Youngstown, July 25. Dr. Klyne had spent his entire medical career in Youngstown, and was twice elected to the office

of county coroner. His widow, two brothers, and one sister survive.

*Thaddeus McLaughlin, M. D.*, Eclectic Medical College, Cincinnati, 1904; aged 42; member of the Ohio State Medical Association; died at his home in Springfield, July 24. Dr. McLaughlin had practiced in Springfield for 16 years and formerly served as secretary of the Clark County Medical Society. Surviving are his son, parents and two sisters.

*Albert Shunk, M. D.*, Columbia University College of Physicians and Surgeons, New York, 1886; aged 57; member of the Ohio Medical Association, died at his home in Mansfield, July 14. For 16 years following his graduation Dr. Shunk practiced in New York City, where for a number of years he was house physician and surgeon at St. Elizabeth's Hospital. He came to Mansfield in 1901 and has since made his home there. He is survived by his wife.

*W. C. Steele, M. D.*, University of Wooster Medical Department, Cleveland, 1881; aged 68; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in North Canton, August 6. Dr. Steele had been a practitioner in that vicinity for nearly 40 years. He leaves a widow, one son and two daughters.

*Winthrop F. Thatcher, M. D.*, University of Pennsylvania School of Medicine, Philadelphia, 1901; aged 45; member of the Ohio State Medical Association and Fellow of the American Medical Association; died, August 11, of injuries received when his machine was struck by an interurban car near Sandusky. Dr. Thatcher's home was in Oberlin.

### CORRECTION

Through misinformation the death notice of *Dr. Milton Hopper* was chronicled in the July issue of *The Journal*. We are now authentically advised that Dr. Hopper, a graduate of Ohio Medical College in 1881, is a resident of Gary, Indiana, and is enjoying good health.

### Optometry Law Clarified

Answering inquiries from the Ohio State Board of Optometry relative to interpretation of sections of the optometry act, Attorney General Price has rendered an opinion in which the following rulings are set forth:

1: "Peddling" as used in the act includes practicing of optometry from door to door, but not the soliciting of patients to be treated.

2: Nonresidents not possessing required educational qualifications are not eligible to take the standard examination, but those who have practiced for two years prior to passage of the act may take the limited examination.

3: Physicians practicing under state license are exempt from the provisions of the act and may advertise themselves as optometrists.



## General Interest Manifested in Plans for Series of Post-Graduate Lectures Under Auspices of Medical Education Committee

Widespread interest in the plans of the Committee on Medical Education of the State Association for its annual post-graduate lectures, forecast every success for the series of group meetings to be addressed during the fall months by Dr. Henry John Gerstenberger of Cleveland. Dr. Gerstenberger will bring to the members of the Association some of the newest developments in the field of pediatrics, of value to the general practitioner from the standpoint of prevention, diagnosis and treatment.

Inasmuch as this season's series of lectures is being started somewhat later than has been customary in other years, the committee has arranged for Dr. Gerstenberger to speak before several of the annual meetings of the various district societies of the Association, thereby reaching a large percentage of the membership in a shorter period of time. Such other group meetings will be provided as are necessary to enable a large proportion of the membership of the Association to avail itself of the opportunity to secure post-graduate instruction. The schedule to date is as follows:

September 7 .....	Athens
September 9 .....	Chillicothe
September 21 .....	Canton
September 24 .....	Dayton
September 29 .....	Marion
September 30 .....	Zanesville
October 7 .....	Gallipolis
October 26 or 27.....	Tiffin

Most of the above meetings are district meetings and will include the physicians of every county in the respective districts. The lecture will require about four hours and the plan of holding a late afternoon session and a dinner, followed by a short after-dinner session, which has proved successful in previous years, will be generally adhered to this season.

Officers of the Tenth District are anticipating a big attendance at the meeting in Chillicothe on September 9. Dr. S. J. Goodman is councilor of the district, Dr. R. W. Holmes of Chillicothe is president of the society and Dr. James A. Beer of Columbus, secretary. The meeting will be held in the Masonic Temple, starting at 2:30 p. m., and at 6:00 the visiting physicians will be the guests of the Ross County Medical Society at a dinner in Trinity Church. In addition to physicians in the Tenth District, an invitation has been extended to those of Fayette, Pike and Scioto Counties to attend the Chillicothe meeting.

An excellent idea of the thoroughness which will characterize Dr. Gerstenberger's presentation of the subject of pediatrics may be had from the following outline of his lecture:

### A

#### FUNDAMENTAL CONSIDERATIONS IN PEDIATRICS

I. The physiology of nutrition from the standpoint of anatomy, bacteriology, bio-chemistry and bio-physics.

II. Growth and development of the normal infant, pre-school and school child.

III. The feeding of the normal infant:

(a) With break milk.

(b) With artificial food.

This division will consider what is generally called infant feeding—quality, quantity, hygienic and caloric value of the food, number of feedings in 24 hours, raw, boiled or pasteurized milk, etc.

IV. The feeding of the normal pre-school and school child.

V. The pathology of nutrition in the infant (nutritional disturbances, and diseases of the gastro-intestinal tract; their diagnosis, prognosis, treatment and prevention.)

VI. The pathology of nutrition in the pre-school and school child (tonsils, adenoids, teeth, temperament, environment, chronic and acute infectious diseases) its diagnosis, prognosis, treatment and prevention.

### B

#### NEWER DEVELOPMENTS IN PEDIATRICS OF PRACTICAL IMPORTANCE TO THE FAMILY PHYSICIAN

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III. ECZEMA, ASTHMA, URTICARIA—Etiology, diagnosis, prognosis and treatment.

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V. BRONCHIAL GLAND TUBERCULOSIS—Diagnosis, prognosis and treatment.

VI. SCROFULA—Diagnosis, prognosis, treatment and prevention.

VII. SCURVY—Diagnosis, prognosis, treatment and prevention.

VIII. ANEMIA—Diagnosis, prognosis, treatment and prevention.

IX. RICKETS — Diagnosis, prognosis, treatment and prevention.

X. SPASMOPHILIA—Diagnosis, prognosis, treatment and prevention.

XI. CONVULSIONS (Non-Spasmophilic)—Etiology, diagnosis, prognosis and treatment.

XII. PYLORO SPASM — Etiology, diagnosis, prognosis and treatment.

XIII. CYCLIC VOMITING—Etiology, diagnosis, prognosis and treatment.

XIV. ACIDOSIS AND ALKALOSIS—Etiology, diagnosis, prognosis and treatment.

XV. SALINE INFUSION, INTRAPERITONEAL IN-



Dr. Henry John Gerstenberger

JECTION, RECTAL INSTALLATION—Indication and method.

XVI. PYELITIS, PYLO-CYSTITIS, PYLO-NEPHRITIS—Etiology, diagnosis, prognosis and treatment.

XVII. OTITIS MEDIA—Etiology, diagnosis, prognosis and treatment.

XVIII. LUMBAR PUNCTURE, CISTERN PUNCTURE, VENTRICULAR PUNCTURE, LONGITUDINAL SINUS PUNCTURE—Indication and method.

XIX. PREMATURE INFANT—Diet and care.

XX. NEUROPATHIC INFANT—Diet and care.

The Committee on Medical Education was established by the Association in 1916 for the purpose of bringing to its members, and particularly the general practitioner who finds it impossible to leave his practice for any length of time, some form of post-graduate instruction such as that presented in the university extension courses and which is so essential to the doctor who wishes to keep pace with modern progress. Successful lectures have heretofore been presented by Dr. Charles E. Briggs, Cleveland, on "Fractures and Dislocations;" Dr. William D. Porter, Cincinnati, on "Obstetrics;" Dr. C. F. Hoover, Cleveland, "Fundamentals of Physical Diagnosis," and Dr. Harold N. Cole, Cleveland, on "Venereal Diseases, Their Diagnosis, Treatment and Control."

The subject of pediatrics was selected for the 1920 lectures because of its very wide appeal to the membership of the Association. Dr. Gersten-

berger is professor of pediatrics at Western Reserve University Medical School, medical director of the Cleveland Babies' Dispensary and visiting pediatricist to Lakeside Hospital. He is eminently qualified to present his subject in an interesting and instructive manner, and the support of the membership for this work, which is numbered among the Association's most important activities, is solicited.

### Population of State Institutions

Figures compiled by the State Board of Administration from reports made by the officers of the 21 state institutions under the control of the board place the average daily population of these institutions for the fiscal year ending June 30, 1920, at 23,267, an increase of 616 over the preceding year.

The group of hospitals for the insane showed with one or two exceptions, a decrease in population, while the penal institutions showed a substantial increase. Of the total increase in population of the state institutions of 616, the penal institutions had a gain of 398, the largest gain being made at the reformatory at Mansfield, which jumped from an average daily population of 1343 in 1919 to 1617 in 1920, or a gain of 274. The penitentiary shows an increase of only four over that of a year ago.

The population of the state institutions in Columbus follows: State hospital for the insane, 1882, as compared with 1851 in 1919; institution for feeble-minded, 2447, as compared with 2293 a year ago; school for the blind, 204; state school for the deaf, 495, as compared with 462; penitentiary, 1885, as against 1881 in 1919; bureau of juvenile research, 20, as against eight a year ago.

Population of other institutions was: State hospital at Athens, 1282, as compared with 1316 in 1919; state hospital at Cleveland, 1714, as against 1761; state hospital at Dayton, 1210, as against 1237; state hospital at Lima, 850, as against 826; state hospital at Longview, Cincinnati, 1456, as against 1492; hospital at Massillon, 1808, as against 1775; hospital at Toledo, 1855, as against 1787; Ohio Soldiers' and Sailors' home, Sandusky, 861, as compared with 920; Boys' Industrial school, Lancaster, 1195, as against 1179; reformatory for women, Marysville, 155, as against 160, and the Girls' Industrial school, Delaware, 1195, as against 1460.

The greatest loss is shown at the soldiers' home, Sandusky, where the average daily population fell from 920 to 861, a loss of 59 for the year.

The hospital for feeble-minded shows an increase of 154, but this has been made possible by completion of additional cottages at the Orient farm. With equipment installed in two more cottages which have just been finished at least 200 more children will soon be housed at Orient, a branch of the Columbus hospital.



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# MEDICAL COMMENT ❀ ❀ ABSTRACTS AND CURRENT TOPICS OF INTEREST

THE PUBLICATION COMMITTEE IS MORE THAN ANXIOUS TO MEET THE NEEDS OF THE JOURNAL'S READERS. IN CONSEQUENCE THE MEDICAL EDITOR IS INITIATING A NEW DEPARTMENT TO BE DEVOTED TO MEDICAL COMMENT, ABSTRACTS, AND CURRENT TOPICS OF INTEREST TO THE GENERAL PRACTITIONER. THE EDITORIAL POLICY OF THIS NEW DEPARTMENT WILL BE ONE OF SERVICE AND SUGGESTIONS AND CONTRIBUTIONS WILL BE GRATEFULLY RECEIVED.—McM.

## Brain Cells and Intellect

IMBECILES have fewer brain-cells than normal persons. This has been known to pathologists for some time. In 1895 an actual count of cells in the higher brain showed this to be the case. In *The Journal of Comparative Neurology*, Dr. Robert S. Ellis describes a count of what are called the Purkinje cells, after a noted Bohemian physiologist. These are large, flask-shaped cells deep in the outer layer of the lesser brain, or cerebellum, and Dr. Ellis finds that their number is small in the case of born idiots. In sufferers from brain disease, such as paresis, the cells are there, but they have disintegrated, and little remains of them but the enveloping fibers. Says Dr. Ellis, as quoted in *The Journal of Heredity* (Washington, November, 1919):

"In the spring of 1916, while examining the cerebellum of a general paralytic, the writer was first impressed by the fact, familiar perhaps to most neuropathologists, that in this disease there is often a disintegration and disappearance of a large number of the Purkinje cells, leaving, however, the basket of fibers which normally surrounds them. Over a year later, while examining the cerebellum of a microcephalic idiot, the same scarcity of Purkinje cells was observed, with the difference, however, that the section did not show the same evidence of the cells having become reduced in number by disintegration; the empty pericellular baskets were not found as in the case of paresis; it seemed, rather, that through some defect of development the normal number had never been present.

"In order to get a fair basis for comparison, a number of cerebella were studied and the relative frequencies of cells noted. In some of the cases the cells appeared to be almost uniformly distributed and with few large spaces between them; others showed losses similar to the two cases already mentioned.

"Among the cerebella examined was one of a man who had died at about the age of sixty-five years after a protracted illness, and this, too, showed a distinct loss of cells. So from this preliminary set of observations it seemed clear that the number of Purkinje cells is variable under different conditions.

"It is well known that in paresis, in extreme old age, and in low grades of feeble-mindedness

there is ordinarily a considerable degree of deficiency in motor coordination. The question consequently arose, how far is it possible to find differences in the number of cells that will account, partially at least, for the observed differences in behavior?

"The writer's primary interest at the time of taking up this investigation lay in the question of the anatomical basis of mental defect, and it seemed not improbable that a careful study of the Purkinje cells might throw some light on one of the most evident deficiencies found in such cases. The human motor-mechanism is much more highly developed than that of lower forms, especially with reference to speech, hand-movement, and the maintenance of equilibrium while standing or walking. Mental defectives generally show less motor-control along these lines, and it is desirable that we know as far as possible the neural basis for such lack of coordination. It accordingly seemed worth while to determine whether the brains of aments show defects in other parts, such as the cerebellum, which is not generally associated with intelligent reactions as such."

Dr. Ellis concludes that in low-grade mental defectives there is a distinct deficiency in a large percentage of the Purkinje cells. He does not go into the question of heredity, but he does contend that practically all the cases are due to some form of antenatal degeneration.

## American Public Health Association Meeting

The 1920 annual meeting of the American Public Health Association will be held in San Francisco, September 13 to 17, inclusive.

The program of the meeting promises some interesting discussions on vital public health problems. As announced by the secretary it will include the following entries: Western health problems; narcotic control, food poisoning; organization of child hygiene; mental hygiene and health centers. The foregoing subjects and others will be distributed among the following ten sectional groups: General Sessions; Public Health Administration; Laboratory; Vital Statistics; Sociological; Sanitary Engineering; Industrial Hygiene; Food and Drugs; Personal Hygiene, and Child Hygiene.



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## Volume of Work and Improved Methods Feature Year for Medical Department of Industrial Commission

The annual report of the Medical Division of the Industrial Commission filed by Dr. Thurman R. Fletcher, chief medical examiner, for the year ending July 1, 1920, shows the past year to have been a memorable one for the unusual amount of routine work handled and the improvements made in the methods employed.

With due regard to the importance of other divisions of the Commission engaged in executing the Workmen's Compensation Law, it must be admitted that the Medical Division is the most essential link in the chain. The work of this division is gradually increasing and broadening and there is pressing need for enlargement of the personnel of the medical examining force.

All claims must be approved from a medical standpoint before hearing in order that cases of disability not due to injury and those that are clearly fraudulent may be weeded out. Practically all proof filed is of a medical nature and only trained medical men can draw logical conclusions and formulate opinions based on such proof. The present limited force must not only keep pace with the new claims filed daily, but handle a large number of continued claims, many of which date back five or six years and require as much time for review and report as new matters.

The report states that about twelve thousand special examinations were made in the past year as against ten thousand in the preceding year. This work is of the greatest importance and merits the services of a full-time medical investigator. Due to pressure of work only the part-time service of one medical examiner is devoted to it.

Another class of cases that is becoming a weighty factor in the work of the Division is that in which bills for medical, hospital and nursing services exceed two hundred dollars. While the actual number of such cases, 1,024, is small in comparison with the total filed, they involved an expenditure of \$118,690.49 last year and are constantly increasing in number. All of these claims require special reports and are now of such frequency that the time of one medical examiner is largely devoted to this work.

In prolonged disability claims the Division has perfected a system of keeping in close touch with claimants by periodical examinations made either at the claimant's home or at a point within easy traveling distance from his home. Two examiners devote their entire time to this work and in case of necessity one or even two more are temporarily detailed to it. Examinations are made from time to time, as the character of the disability requires, but the Division does not attempt to dictate the treatment in any case although it is always glad to consult with the attending physician when requested to do so. This

system gives the Division reliable and accurate information regarding the claimant's condition and creates a feeling of trust and confidence on the part of the claimant, his employer and the attending physician.

The report calls attention to the necessity of establishing and maintaining in connection with the Division a reliable and up-to-date reference library for the use of the medical examiners whose duties include the preparation of many reports and opinions. This recommendation is certainly deserving of favorable action as it is impossible for any physician, no matter how able, to keep abreast of modern medical progress unless such literature is available.

The outstanding feature of the year's activities, and one that has materially strengthened the prestige of the Industrial Commission, was the inauguration of new medical and surgical, and hospital fee schedules providing increased fees for those who treat workmen's compensation cases. The revised medical and surgical fee schedule, which became effective June 1, was adopted by the Commission on recommendation of a special committee of the Ohio State Medical Association. It provides a flat-rate fee for fractures, amputations, dislocations and a number of special operations, a plan that has proved successful in a number of other states. The new hospital schedule which became effective July 1, was adopted after consultation with a committee of the Ohio Hospital Association and is based on the actual patient-per-day cost of each institution, as shown by its report to the bureau of hospitals of the State Department of Health. Neither of these schedules have been in operation long enough to demonstrate their full value but criticisms thus far have been favorable and it is generally believed they will work out satisfactorily for all concerned.

## State Medical Board Notes

Violators of the Medical Practice Act hailed into Cleveland Municipal Court recently have been apprised in a forceful manner of the weight of the heavy hand of the law. On July 28, L. D. Moore, arraigned before Judge Silbert on a charge of illegal medical practice, was fined \$500.00. On the following day Judge Silbert imposed upon Leo J. Czechowski, arraigned on a similar charge, a fine of \$500.00 and costs, of which \$50.00 was ordered paid at once and \$450.00 suspended for one year. Czechowski was ordered to close his place of business.

Springfield City Hospital, Van Wert County Hospital and St. Alexis Hospital, Cleveland, were inadvertently omitted from the list of Ohio hospitals recognized by the State Medical Board as meeting the requirements prescribed by law for conducting training schools for nurses, published in the August issue. The first two are recognized until July 1, 1921, and the latter until January 1, 1921.



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## COUNTY SOCIETY REPORTS

### SECOND DISTRICT

*Champaign, Clark and Greene County Medical Societies* held their annual meeting at Neff Park, near Yellow Springs, July 21. Various contests and games featured the afternoon's entertainment, which was followed by a basket supper.

*Darke County Medical Society* had a splendid meeting at Greenville, August 12, with 30 members present. The program was participated in by Drs. J. F. Baldwin, R. L. Barnes, Columbus, and Charles E. Kiely, Cincinnati. Dr. Baldwin's subject was "The Doctor Who Thinks," while Dr. Barnes spoke on "The Blood, as a Diagnostic and Therapeutic Measure," and Dr. Kiely on "The Diagnosis of Intra-Cranial Tumors and Conditions Stimulating Them."—B. F. Metcalf, Correspondent.

### THIRD DISTRICT

*Hardin County Medical Society* met in Kenton, July 15. After a short business session the society listened to two interesting addresses by Dr. Charles McGavran, president of the Columbus Academy of Medicine, and Dr. Ernest Scott, also of Columbus, upon the subject "Cardio Vascular Lues, with Clinical Features." Numerous pathological specimens were exhibited and the lectures illustrated by lantern slides.—D. H. Bowman, President.

### FOURTH-FIFTH DISTRICTS

*Eric, Ottawa and Sandusky County Medical Societies* held a rousing meeting at Cedar Point, July 27, attended by about 70 members of these and adjoining societies. Addresses were made by Drs. Charles Lukens of Toledo, president of the State Association; J. G. Keller of Toledo and R. K. Updegraff of Cleveland, councilors for the Fourth and Fifth Districts, respectively, and George W. Crile of Cleveland.

### SEVENTH DISTRICT

*Tuscarawas County Medical Society*, meeting in the high school auditorium at New Philadelphia on July 22 had as its guest Dr. N. W. Ingalls of Cleveland, who gave an illustrated lecture on "The Pathology of the Embryo." Dr. J. A. McCollam of Uhrichsville discussed the health insurance problem.—E. D. Moore, Secretary.

### EIGHTH DISTRICT

*Fairfield County Medical Society* met in regular monthly session at the Lancaster Municipal Hospital, July 27. The paper of the evening was read by Dr. Louis Mark, of Rocky Glen Sanatorium, McConnelsville, who outlined the treatment and management of pulmonary tuberculosis. The paper was one of the most interesting and

instructive the Society has heard this year. After the meeting adjourned Dr. Mark gave some interpretations of chest plates that were on file in the hospital.

Fairfield County Society held a joint meeting with Licking and Muskingum County Medical Societies at Avondale Park, Buckeye Lake, August 12. An interesting program was rendered which included addresses by Dr. Wells Teachnor of Columbus, president-elect of the State Association, and Dr. Carl Sawyer of Marion. Mr. Don K. Martin, executive secretary of the Association, was also a guest at the meeting.—C. H. Hamilton, Secretary.

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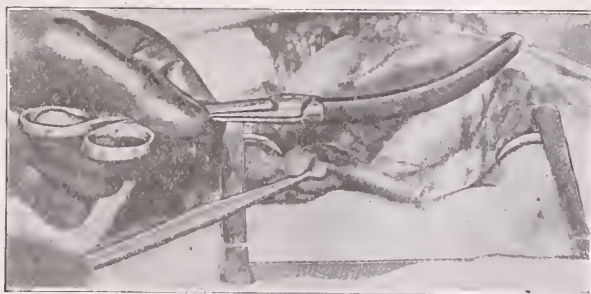
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## Survey of Crippled Children Portends Effective Steps for Their Care and Treatment

The program of activities in behalf of Ohio's crippled children has been officially started with a bulletin directed by the State Department of Health to all health commissioners of the state requesting them to assume responsibility for registering such children in their districts and enclosing blank report cards for this purpose. This is the first step in an extensive survey to be conducted under the joint auspices of the Ohio Institute for Public Efficiency, the State Department of Health, Board of State Charities, State Department of Public Instruction, the Ohio Society for Cripples and the Ohio State Medical Association, looking toward a solution of this problem that will afford proper treatment, care and education of child cripples.

Heretofore, the state's efforts in this line have been somewhat limited. A number of years ago the state legislature appointed a commission to plan and erect an institution for the care and treatment of crippled children and appropriated \$90,000 as a preliminary fund for the undertaking. The institution has not been erected because accurate information as to the number of children and the needs of the various communities was not available.

Subsequently the legislature provided for the

establishment of special classes in the schools for crippled children, the sum of \$150.00 to be refunded to local boards of education for each child given instruction in one of these special classes. During the last session of the legislature \$15,000 was appropriated for the treatment of individual cripples, whose parents fail or are financially unable to provide such treatment, until such time as an institution is available. This fund is controlled by the State Board of Charities, to which suitable cases may be committed by juvenile courts.

This spring the state organization of Rotary Clubs became interested in the project and formed the Ohio Society for Crippled Children. This society is planning an intensive campaign in every county in the state and its ultimate purpose is the establishment of a hospital for crippled children in each of ten districts into which the state is to be divided.

The undertaking has since been indorsed by the agencies mentioned above and many others. The House of Delegates of the Ohio State Medical Association formally indorsed it during the state meeting in Toledo and requested President Lukens to appoint a special committee to cooperate. This committee consists of Drs. B. G. Chollett, Toledo, A. H. Freiberg, Cincinnati, and A. M. Steinfeld, Columbus.

Briefly, the object of the survey may be summed up as follows:



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1. To determine the number and type of crippled children in the state.

2. To lend immediate assistance to such crippled children as need surgical treatment, through juvenile courts, the Board of State Charities, and the Rotary Club organization.

3. To plan the institution for crippled children on the basis of facts accumulated.

4. To treat and educate crippled children so that the handicap occasioned by their defects may be lessened.

As the State Department of Health points out in its bulletin to health commissioners, this is a singular opportunity for them to take the initiative in a work of far-reaching effect, having a strong appeal to the public and the backing of prominent lay organizations in addition to the medical profession. The work need not prove burdensome to the local health departments as ready cooperation may be expected from physicians, nurses, school officials, teachers, clubs and other sources.

The simple report blanks devised by the State Department of Health for this registration require the following data: name of the crippled child; sex; age; address; economic status; extent of disability—whether able to attend school, in wheel chair, in bed; nature of disability; how long crippled; cause; whether any attempt has been made to correct defect; type of care needed—common school education, vocational training, custodial care or surgery or other treatment. It is suggested that these blanks be distributed among physicians and others who may be in touch with crippled children not seen by physicians.

### Ohio Hospital Notes

Trustees of Toledo Hospital have announced that work on a new 250-bed hospital will be started as soon as a decision on a site can be made. The present quarters, accommodating 130 patients, have proved inadequate for some time, necessitating the refusal of nearly 800 cases since January 1. Since the founding of the hospital, of which Mr. P. W. Behrens is superintendent, more than 64,000 patients have been cared for and 27,000 operations performed.

—Christ Hospital, Cincinnati, has purchased a nearby residence property for \$25,000 for use as a nurses' home and administration building.

—Ground for Youngstown's new municipal hospital was broken recently. The contract awarded calls for an expenditure of \$235,271, the hospital to be completed and in operation in July, 1921.

—Dr. S. S. Goldwater, former New York City health commissioner, has been engaged as consultant in preparing plans for the new Cleveland City Hospital at a fee of \$30,000. It is believed that Dr. Goldwater's previous experience in building 60 hospitals will effect a reduction in

the construction and operating costs of the new hospital.

—Alliance city council has voted to issue \$140,000 in bonds for additions and improvements to the city hospital which will give the institution a 100-bed capacity.

—A site for a hospital for the treatment of soldiers with neuro-psychiatric disorders is being sought in Cleveland by the United States Public Health Service, which has requested the Cleveland Real Estate Board to assist in locating a building suitable for a 150-bed hospital.

—For the first time in nearly two years, Summit County's contagious disease hospital was empty on July 15.

—A \$200,000 bond issue for the erection of a hospital as a memorial to Darke county soldiers and sailors was defeated at the August primaries by more than a thousand votes.

—The annual report of Dr. J. T. Haynes, chief surgeon at the Ohio Soldiers' and Sailors' Home, shows that 98,656 treatments, an average of 270 a day, were administered during the past year.

—Plans are under way for the establishment in Bellefontaine of a hospital unit for the treatment of ex-service men. The unit will be under the supervision of Dr. A. J. McCracken, director and surgeon; Dr. Robert Butler, eye, ear, nose and throat; and Dr. Guy Swan, X-ray.

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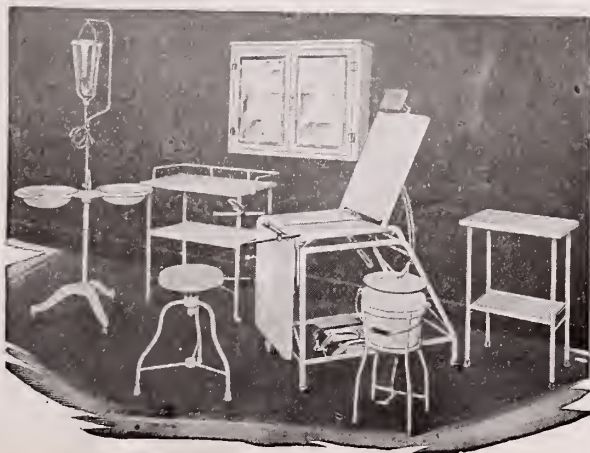
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## Second District Chautauqua, Dayton, September 20-24

The Second Councilor District of the State Association will hold its annual meeting in Dayton, September 20 to 24, inclusive, in the form of a medical chautauqua. For a number of years this district has substituted a five-day post-graduate course for the routine convention, and the success of the venture has attracted favorable comment not only in this state but elsewhere.

Speakers at the 1920 sessions will include Drs. Hugh T. Patrick, Dean D. Lewis, A. C. Croftan, of Chicago; Dr. Walter B. Cannon, of Boston; Dr. Harry Noble, of St. Marys, and Drs. C. F. Hoover and Henry J. Gerstenberger of Cleveland. The latter is this season's lecturer for the Committee on Medical Education of the State Association.

The meetings will be held in the Fidelity-Medical Building, Dayton's ultra-modern medical office building, and the lectures will extend from 9 to 11 a. m., and from 1 to 4 p. m. throughout the five days. A business session and banquet will be held at the Miami Hotel on the evening of September 23, with addresses by Judges H. N. Routzohn and Roland Baggott, of Dayton, Dr. Louis Schwab, of Cincinnati, and Dr. Croftan.

In early August more than two hundred physicians had registered for the course. The registration fee is \$10.00 and includes all or any part of the thirty lectures given and admission to the banquet. While the course is arranged primarily for the benefit of the profession of the Second District, physicians from any part of the state will be welcome. Applications from those outside the district should be mailed, with checks, to Dr. H. C. Haning, 605 Reibold Building, Dayton.

Dr. H. B. Martin, of Springfield, is president of the Second District Society; Drs. E. R. Arn and H. C. Haning, of Dayton, secretary and treasurer, respectively, and Dr. W. A. Ewing is district councilor. The complete program for the meeting, as furnished by Dr. E. M. Huston, of Dayton, chairman of the program committee, follows:

### SEPTEMBER 20.

DR. HUGH T. PATRICK, CHICAGO  
DR. DEAN D. LEWIS, CHICAGO

- 9:00—10:00—Differential Diagnosis of Organic from Functional Diseases of the Nervous System. Dr. Patrick.  
10:00—11:00—Injuries of Peripheral Nerves and Treatment. Dr. Lewis.  
11:00—12:00—Changes in the Nervous System in Pernicious Anemia. Dr. Patrick.  
1:00—2:00—Fracture and Dislocations. Dr. Lewis.  
2:00—3:00—Simple Melancholia. Dr. Patrick.  
3:00—4:00—Ileus. Dr. Lewis.

# Radium Laboratory

350 East State St., Cor. Grant Ave.  
Columbus, Ohio

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Edward Reinert, Ph. G., M. D.  
R. R. Kahle, Ph. B., M. D.

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Adequate dosage for all conditions.  
Radium Needles for suitable cases.  
We desire to communicate and co-operate with physicians and surgeons interested.

## X-Ray Bargains

Schidel high frequency portable X-Ray with tube and holder, cost \$190.00, will sell for \$110.00.

Type AA Vulcan X-ray coil, new with tube and holder, cost \$286.00, will sell for \$190.00.

VIRGIL E. FOWLER,  
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## The Ohio Laboratory

131 E. State St. Columbus, O.

*Analyses and Diagnostic  
Examinations of  
All Kinds*

Laboratory Service Exclusively  
JAMES A. BEER, A. M., M. D.  
Director



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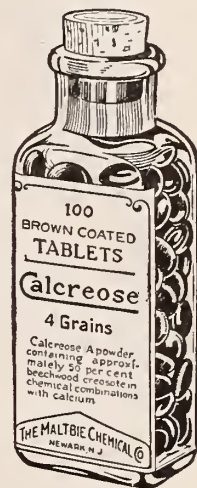
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*Dosage accurate and easily controlled.  
Write for further details and samples.*

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(Publishers Adjusting Association, Inc.  
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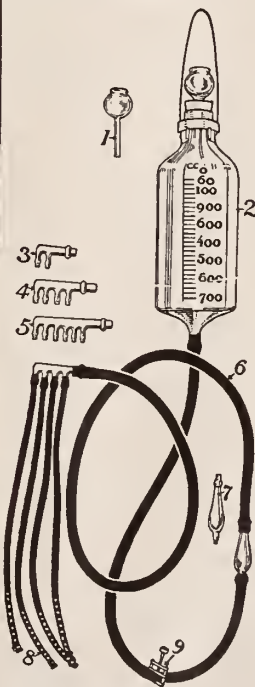
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## SEPTEMBER 21

DR. DEAN D. LEWIS, CHICAGO

DR. HUGH T. PATRICK, CHICAGO

- 9:00—10:00—Tumors of the Breast. Dr. Lewis.  
 10:00—11:00—The Treatment of Functional and Nervous Troubles. Dr. Patrick.  
 11:00—12:00—Ductless Glands, Surgical Aspects. Dr. Lewis.  
 1:00—2:00—Focal Infection and the Nervous System. Dr. Patrick.  
 2:00—3:00—Lessons of War Surgery Applied in Civil Practice. Dr. Lewis.  
 3:00—4:00—Some Common Headaches. Dr. Patrick.

## SEPTEMBER 22

DR. WALTER B. CANNON, BOSTON

- 9:00—11:00—Traumatic Shock, Its Nature.  
 10:00—11:00—Traumatic Shock. Its Treatment.  
 11:00—12:00—Conditions of Normal Digestion.  
 1:00—2:00—Physiological Considerations in the Surgery of the Alimentary Canal.  
 2:00—3:00—The Use and Disabuse of Emotional Excitement.  
 3:00—4:00—Observations of Typhoid Function.

## SEPTEMBER 23

DR. A. C. CROFTAN, CHICAGO

DR. C. F. HOOVER, CLEVELAND

- 9:00—10:00—The Ulcer Syndrome without Ulcer. Dr. Croftan.  
 10:00—11:00—Touch Percussion and the Size and Conformation of the Heart. Dr. Hoover.  
 11:00—12:00—Clinical Studies of Blood Pressure. Dr. Croftan.  
 1:00—2:00—Indications and Methods for the Use of Cardiac Stimulants. Dr. Hoover.  
 2:00—3:00—The Newer Things in Diabetes. Dr. Croftan.  
 3:00—4:00—The Treatment of Goiter and Graves' Disease. Dr. Hoover.  
 6:00 P. M.—Banquet and Business Session, Miami Hotel. Addresses by Judge H. N. Routzohn, Judge Roland Baggott, Dayton, Dr. A. C. Croftan, Chicago, Dr. Louis Schwab, Cincinnati.

## SEPTEMBER 24

DR. HENRY J. GERSTENBERGER, CLEVELAND

DR. HARRY NOBLE, ST. MARYS

- 9:00—11:00—Pediatrics. Dr. Gerstenberger.  
 11:00—12:00—Rational Procedure in Gall Bladder Operation. Dr. Noble.  
 1:00—3:00—Pediatrics. Dr. Gerstenberger.  
 3:00—4:00—The Latest Views of Goiter. Dr. Noble.

## Small Advertisements of Interest

*Wanted*—Full time woman physician. Fifteen hundred dollars per annum with full maintenance. Address, Chief Matron, Girls Industrial School, Delaware, Ohio.

*For Sale*—Surgical Chair, two stands, cabinet, scales, instruments and library. Address Mrs. A. F. Green, West Jefferson, Ohio.

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We are distributors to the Medical Profession of every available Drug and Apparatus used successfully in the treatment of Venereal Diseases. Delivery charges prepaid and all orders shipped on day of receipt. Send for Price List and literature.

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ESTABLISHED 1905

DR. BONNELLE W. RHAMY, Director

Bacteriological, serological, pathological, toxicological and chemical examinations of all kinds given prompt, *personal* attention.

Full instructions, fee table, sterile containers and culture tubes sent on request.

As early diagnosis is the important factor in successful treatment, it will pay to utilize dependable laboratory diagnosis early and often.

Wassermann Test for Syphilis . . . . . \$5.00

(Send 3-5 C.c. of Blood)

On every blood, I use two antigens and run two tests: the regular method and the latest and best, the ice box method, which is especially valuable when testing for cure and in cases giving doubtful reactions. This insures an accurate report.

Gonorrhoea Complement Fixation Test \$5.00

(Send 3-5 C.c. of Blood)

This serologic test is the very best means of determining the presence or absence (cure) of systematic Gonorrhoeal infection.

Tuberculosis Complement Fixation

Test . . . . . \$5.00

Pneumococcus Typing . . . . \$5.00—\$10.00

Blood Typing for Transfusion, each . . \$5.00

Lange's Colloidal Gold Test of Spinal

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Pathological Tissue Diagnosis . . . . . \$5.00

Autogenous Vaccines

Bacteriologic Diagnosis and Cultures - - - \$2.00

Twenty Doses Vaccine in 2 C.c. Vials - - - 5.00

Rooms 306-309 Gauntt Bldg.

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## Face Fallacy with Fact

Repetition and reiteration of erroneous conclusions arrived at without logical deduction and study of actual facts, circulate fallacies which often handicap and hinder the physician in his efforts to do the best thing for his patients.

### IT IS A FACT

that Borden's Eagle Brand constitutes, when properly diluted and given, an adequate, properly-balanced, safe and satisfactory food for infants from birth up to one year of age. This has been incontrovertibly established by the records and results of our Baby Welfare Department

and experience of physicians and nurses all over the world.

### IT IS A FALLACY

that condensed milk is dangerously deficient in fat. That its sugar content is excessive and unsafe. That its use predisposes to rickets or malnutrition. That it should not be used for infant feeding. To face such fallacies with facts, in the interest of the medical profession, mothers and children, will be the object and accomplishment of subsequent advertisements in this space.

See this space in October number.

THE BORDEN COMPANY  
Borden Building New York City

*Borden's*  
**EAGLE BRAND**  
Condensed Milk

## A Tide-Over Diet

For sick and convalescent adults.  
Used in HOMES, SANITARIUMS,  
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### DENNOS FOOD

A safeguard in Infant Feeding. The whole wheat milk modifier.

*Samples and literature furnished free to the profession on request*

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A non-nutritive flour for filling out reduced diets

27 oz. Bags \$2.50 postpaid

Larger quantities at lower rates—Recipes furnished

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## DIABETES MELLITUS

You need this splendid starch-free, sugar-free flour.

### DIAPROTEIN

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Enables your patients to enjoy an attractive variety of wholesome, palatable bread, muffins, cakes, etc., which are absolutely free from starch and sugar.

Thousands of physicians are prescribing Diaprotein. A trial will convince you of the superiority of this, the only preparation which is made from pure food casein. Accepted by the Council of Pharmacy of the American Medical Association.

Two weeks' supply \$2.95. Directions and recipes with each package. Order from your druggist or direct from

**THE DIAPROTEIN CO.**  
234 West Randolph St. Chicago



## Constructive Interest Tends Toward Concerted Program in Uniform Health and Physical Instruction in Public Schools

Always true to its ideals for the safeguarding of the public against disease even at its own monetary loss, the medical profession is taking a greater and more constructive interest in public health matters than ever before.

As one of the features in this program, the Ohio State Medical Association is committed to a program of cooperation with other agencies in formulating plans for uniform health and physical instruction in the public schools, emphasizing a need for centralized supervision in the promotion of physical development in the younger generation.

The Ohio State Department of Public Instruction has promised its cordial cooperation in a comprehensive program. The State Department of Health through its Bureau of Child Hygiene, with the approval of the committee on hygiene of the Ohio Council on Child Welfare, has already outlined primary suggestions for the teaching of hygiene in the schools of Ohio. The Department of Public Instruction has requested school superintendents to conform to such a program. Members of the Ohio Teachers Association have already indicated their interest.

It needs no argument to show one member of a community suffering from a contagious or infectious disease is a menace to every other mem-

ber of that community. To safeguard your own health, you must safeguard the health of your neighbors. That member of a community who disregards the principles of sanitation inflicts an injury upon the community and does an injustice to his neighbors, for whatever affects one individual of a community, must also affect, in a greater or less degree, the rest of the community.

What then are some of the duties of the individual citizen to the public health? What should he do in order to promote the public health? What should he do in order to promote the public health in his community, his state, or the country at large?

One of the first things a citizen should do is to inform himself in regard to modern sanitary practices, and the reasons for them. It is necessary that his knowledge should be profound. One should know, in a general way the causes of certain diseases, and how they can be prevented. One should know that the common house-fly can spread typhoid fever, cholera, tuberculosis and other diseases; that screening of our houses, food, etc., and preventing, as far as possible, the breeding of flies, are necessary measures for protection. One should know that infantile paralysis is spread by means of the stable fly; that malaria and yellow fever are spread by cer-

### THE MEAD JOHNSON POLICY

Mead's Dextri-Maltose is advertised only to the Medical Profession. No feeding directions accompany trade packages. Information regarding its use reaches the mother only by written instructions from her doctor on his own private prescription blank.

The Infant Feeding Materials which we make are intended solely for use as prescribed by the family physician. Requests from parents and other laymen for feeding directions are courteously refused with the explanation that each baby presents an individual feeding problem with which only a physician can successfully cope.

On request we will take pleasure in mailing you a copy of the booklet in which our position is explained to the laity and to send you sufficient



samples to enable you to judge the value of Mead's Dextri-Maltose and Mead's Dry Malt Soup Stock in your own infant feeding cases.

Mead's Dextri-Maltose is Offered in Three Forms

No. 1. With 2% Sodium Chloride. No. 2. Unsalted. No. 3. Same as No. 2, plus Potassium Carbonate 2%.

**MEAD JOHNSON & CO., Dept. B, EVANSVILLE, IND.**



USE  
**Sherman's**

**Bacterial  
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TO  
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AGAINST

**Colds      Influenza  
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*Write for Literature.*

**G. H. SHERMAN, M. D.**

*Manufacturer of Bacterial Vaccines*

**Detroit, Mich., U. S. A.**

**Dares Haemoglobinometer**

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

**Tycos Office Sphygmomanometer**

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

**Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals**

Your orders will receive prompt attention—  
"You will do better in Toledo."

**The Rupp and Bowman Co.**

319 Superior St.  
**TOLEDO, OHIO**

**Does Professional  
Protection Pay  
for Itself?**

*...it does*

**The Medical Protective Company,  
Fort Wayne, Indiana.**

Gentlemen:

A practitioner in our building is now being sued for \$10,000 and has laughed at me for paying \$15.00 a year for the last 15 years—\$225.00. His lawyer (such as it is) will cost him \$400.00 to \$500.00 and who knows how the case will come out. I'm not laughing at him, but sympathize at his poor business sense.

Yours truly,  
....., M. D.

**For Medical Protective Service  
Get a  
Medical Protective Contract**

**Prevention---Defense---Indemnity**

1. All claims or suits for alleged civil malpractice, error or mistake, for which our contract holder,
- 2 Or his estate is sued, whether the act or omission was his own
- 3 Or that of any other person (not necessarily an assistant or agent)
- 4 All such claims arising in suits involving the collection of professional fees.
- 5 All claims arising in autopsies, inquests and in the prescribing and handling of drugs and medicines.
- 6 Defense through the court of last resort until all legal remedies are exhausted.
- 7 Without limit as to amount expended.
- 8 You have a voice in the selection of local counsel.
- 9 If we lose we pay to amount specified, in addition to the unlimited defense.
- 10 The only contract containing all the above features and which is protection per se. A sample upon request.

**The Medical Protective Co.**  
of

**Fort Wayne, Indiana**

*Over Twenty Years of Doing One Thing Right*

tain mosquitoes, and only by these mosquitoes. If the breeding places of these mosquitoes are destroyed, or if the mosquitoes are prevented from biting persons suffering from the disease and afterward biting other persons, yellow fever and malaria can be prevented. We know that vaccination affords protection against smallpox, and that typhoid inoculation will protect against typhoid fever. This sort of information should become common knowledge. It should be taught in the schools, so that the principles for the protection of health can be learned at the earliest age possible. Such knowledge is of more importance to the welfare of the individual than is knowing how to read and write.

The value of this sort of instruction in schools is now being recognized, but there is much to be done in systematizing the work and extending it throughout the entire school course. Too much importance cannot be attached to this matter, for it is vital to the health, well being, and success of the pupil in after life. The object of school instruction is to prepare the pupil for the battle of life, and the most vital thing which we can be taught is how to keep the body in the highest state of efficiency, so that it may be able to perform the duties required of it. The capability, efficiency and earning capacity of one who is sick are far below those of the healthy individual, to say nothing of the happiness and comfort of himself and those with whom he comes in contact.

The primary plan formulated by the Bureau of Child Hygiene provides four classes of instruction for the children from the first grade through the high school.

The first class is for children of the first to third grades and includes toothbrush drills, handkerchief drills, health inspection, health talks, and games and dances. The second class is for children of the fourth, fifth and sixth grades. It includes health inspections, classroom health records, calisthenics, school gardens and study of food values.

The third class for children of the seventh and eighth grades embraces continuation of the foregoing, courses in home care of the sick (for girls), little mothers' league (for girls), junior sanitary police for boys and simple study of municipal sanitation and food control. The course for high school pupils includes study of municipal sanitation and health statistics, athletic contests, pageants, exhibits, addresses on health and the teaching of sex hygiene.

The pamphlet on this subject just issued states as its purpose of outline as an introduction to the classification of children for activity:

"In order to stimulate interest in personal hygiene and general public health matters in the school and community and to combine all such activities in the school, other than those which directly concern medical inspection and supervision in the hands of doctors, dentists and nurses, this outline is presented by the State De-

# Laboratory Service

Every physician must have laboratory work performed at one time or another. Let us serve you.

Hecht Gradwohl and Wassermann.....\$5.00

Pasteur Treatment by Mail.  
Blood Chemical Tests.  
All other Aids.

**Cincinnati Biological Laboratories**  
19 West Stventh Street  
Cincinnati, Ohio

DR. A. FALLER, Director

## New York Diagnostic Society

(Incorporated 1916 under Laws of N. Y.)

Announces 1st Annual Prize Essay

Subject: "Group Diagnosis." For the three best articles on this subject

\$500.00 in Gold is offered

1st prize \$300.00—2nd prize \$150.00—3rd prize \$50.00

Competition closes December 1, 1920

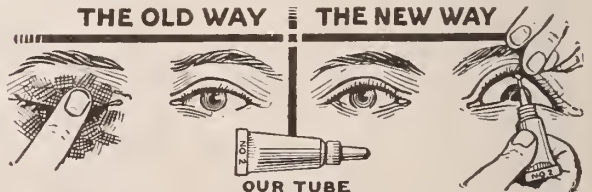
For full particulars see New York Medical Journal of June 12, 1920, or Journal of American Medical Association for May 29, or address

"Annual Prize" Essay, New York Diagnostic Society  
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**NEW YORK DIAGNOSTIC CLINICS**

125 W. 72nd St., New York

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## Better Ocular Therapeutics

Can be obtained by the use of "M-E-S-Co" brand of Ophthalmic Ointments. Reasons: Selected Chemicals, Thorough Trituration, Perfect Incorporation, Sterilized Tubes, Boiled and Strained Petroleum, Excellent Service, No Waste, No Dirty Salve Jar, Right Prices. Write for complete information  
**MANHATTAN EYE SALVE CO., Inc.**  
Louisville, Ky.



# Gonococcus Glycerol-Vaccine

more stable  
more effective  
less toxic

## *Advantages*

1. Possesses 5 to 10 times more immunizing power than saline vaccine.
2. Will not deteriorate.
3. Free from autolytic products; contains gonococcal protein in unaltered form.
4. Does not produce toxic reactions even in large doses.

## *Results*

1. Definite improvement noted in arthritis cases after 4th or 5th dose.
2. Gonococci rapidly disappear from urethral discharges.
3. Clinical results more favorable than with any other type of gonococcus vaccine.

The types of casts in which Gonococcus Glycerol-Vaccine has been used with encouraging results are chronic gonorrheal infections, including gonorrheal rheumatism, epididymitis, prostatitis and posterior urethritis.

*Further information on request*

## Lederle Antitoxin Laboratories

511 Fifth Avenue

New York City

partment of Health as an aid to teachers and school workers.

"It is issued with no idea of dictating any program but simply to point out where the material for the activities presented by different private organizations may be obtained. There are also presented suggestions as to activities which may be carried out to supplement the programs presented by other organizations.

"Any part of the outline or all of it may be adopted, according to the size of the school and the work may be supervised by either a teacher or a nurse.

"The programs prepared by other organizations and already in operation are suitable for certain ages of children in particular types of schools. They include such schemes as the 'Modern Health Crusaders,' the Red Cross courses for Home Care of the Sick, the 'Little Mother's Leagues,' the 'Junior Sanitary Police,' etc. These are valuable for the older children in graded schools. Where suitable, they are excellent and should be more widely used.

"For ungraded schools in villages and rural sections, simpler activities may be advisable. These may also be helpful for the younger children in city schools as supplementary to the programs mentioned above.

"In planning our work, we must bear in mind the principles of child psychology, remembering the value of self government, public opinion, etc. Though perhaps far easier for a teacher to teach a lesson in hygiene by the direct methods used in arithmetic or geography, the results will not be nearly as effective as to use the laboratory method and guide the children to teach themselves and each other by play and competition. If life be, as some say, 'a great game,' we can at least learn the rules and make it less a game of chance.

"The more the children head their own health organizations, and the more they feel responsible for each other's health and take a pride in the sanitation of their own school rooms, the deeper will the impressions be on their own minds. Children love responsibility and thrive on it. Also, children are tremendously swayed by public opinion,—meaning, of course, the opinion of their peers. Ridicule of 'the other kids' is more to be feared and candid praise of the other children more to be prized than criticism or praise of adults.

"Therefore the following organization is suggested, whatever may be the type of work undertaken. The groups may be known as Health Leagues, or designated by any other name the school may choose.

"There may be a health officer in each school room, elected for one or two weeks as seems desirable, a boy and a girl alternately. If the teacher prefers, a boy may be chosen for the boys and a girl for the girls.

"There may be a school council made up of the

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health officers of the school, presided over by a leader from the group. The council should meet once a month to hear grade reports and to discuss school programs and improvements. The Superintendent or a teacher should attend these meetings.

"A City Council may be formed, composed of representatives from the different schools. This Council should be affiliated closely with the superintendent of schools and the local commissioner of health, should meet once in three months and should have really good health addresses from the best local people or from outside speakers."

### Ohio Women Organize Federation for Social Health

Leaders of women's organizations, women members of boards of education, social workers and other women interested in public welfare organized their forces at a meeting in Columbus, August 2 and 3, in the formation of the Ohio Women's Federation for Social Health.

The federation was formed to enlist the support of the women of Ohio for the fight against vice and venereal diseases. It will work with the state department of health, and the United States interdepartmental social hygiene board in carrying out its three-fold program—enforcement of the laws; organization of effective means for care of the mentally defective women, and the reclamation of normal ones who may be restored to useful lives; instruction of parents in regard to sex hygiene, and a conservative program for teaching it to children.

The need for the federation arises through the fact that the program of the state department of health is limited to the medical and public aspects of the disease problem, leaving the normal and legal phases without attention from any central body pursuing a vigorous policy.

Women's protective associations in several cities have done valuable work by federating local organizations engaged in work for the control of vice, but the new federation represents the first effort to build up a unified state-wide program in this regard.

Mrs. J. A. Reibel, president of the Columbus Federation of Women's Clubs and chairman of the public health work of the Ohio Federation of Women's Clubs, was elected president of the new organization. Among those who addressed the Columbus meeting were State Health Commissioner Freeman, H. H. Goddard, director of the Ohio Bureau of Juvenile Research, Vernon F. Riegel, state superintendent of Public Instruction, and representatives of the American Social Hygiene Association and the United States interdepartmental social hygiene board. Delegates from many health departments throughout the state were in attendance.

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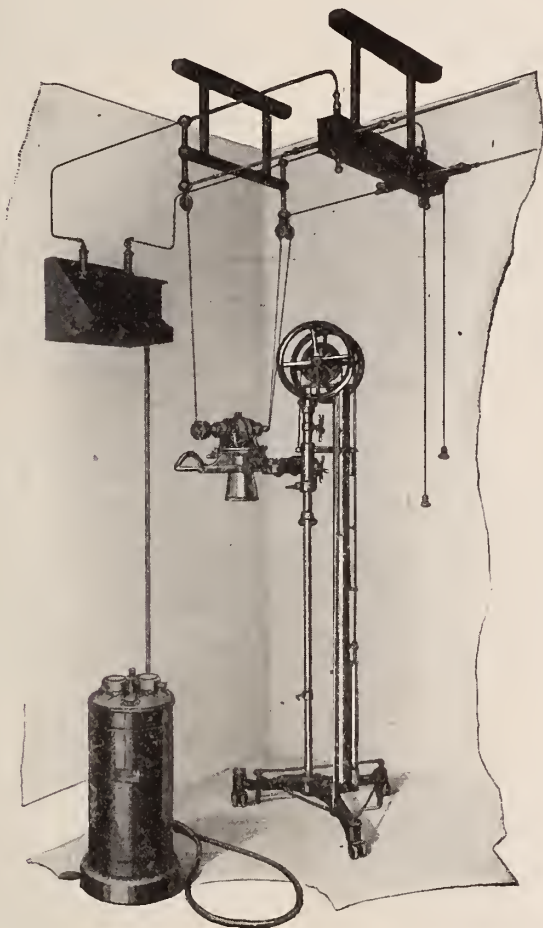


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## CORRECTED ROLL OF DISTRICT AND COUNTY SOCIETIES

Societies	President	Secretary
<b>First District</b> .....F. M. Fitton, Hamilton.....Eric Twachtman, Cincinnati.....Cincinnati, 1919		
Adams.....	Titus Stephenson, Winchester.....	O. T. Sproull, West Union.....3d Wednesday in April, June, Aug., Oct.
Brown.....	R. B. Hannah, Georgetown.....	Geo. P. Tyler, Jr., Ripley.....4th Wednesday in Feb., May, and Nov.
Butler.....	James G. Grafft, Trenton.....	F. M. Fitton, Hamilton.....2d Wednesday, monthly
Clermont.....	A. B. Rapp, Owensville.....	F. H. Lever, Loveland.....3d Wednesday, monthly
Clinton.....	Robert Conard, Blanchester.....	Kelley Hale, Wilmington.....2d Thursday, monthly
Fayette.....	H. L. Stitt, Wash'gton C. H.....	Lucy Pine, Washington, C. H.....1st Thurs., March, June, Sept. Dec.
Hamilton.....	H. Kennon Dunham, Cin'nati.....	O. J. Seibert, Cincinnati.....Monday evening of each week
Highland.....	J. H. Frame, Highland.....	H. H. Lowe, Leesburg.....1st Wednesday in Jan., April, July, and Oct.
Warren.....	S. S. Stahl, Franklin.....	Herschel Fisher, Lebanon.....1st Tuesday in May, June, July, Sept., Oct. and Nov.
<b>Second District</b> .....H. B. Martin, Springfield.....E. R. Arn, Dayton.....Dayton, Sept. 20-24		
Champaign.....	D. C. Houser, Urbana.....	E. R. Earle, Urbana.....2d Thursday, monthly
Clark.....	R. C. Hebble, Springfield.....	R. W. Boehme, Enon.....2d and 4th Monday each month
Darke.....	G. H. Harley, Hollansburg.....	A. F. Sarver, Greenville.....2d Thursday each month
Greene.....	Reed Madden, Cedarville.....	Reyburn McClellan, Xenia.....1st Thursday each month except October
Miami.....	R. D. Spencer, Piqua.....	J. F. Beachler, Piqua.....1st Thursday each month
Montgomery.....	E. H. Mallow, Dayton.....	G. G. Giffin, Dayton.....1st and 3d Friday each month
Preble.....	W. H. Tucker, Eldorado.....	S. P. Carter, W. Manchester.....3d Thursday, monthly
Shelby.....	O. O. LeMaster, Sidney.....	Lester C. Pepper, Sidney.....1st Thursday, monthly
<b>Third District</b> .....Austin S. McKittrick, Kenton.....W. C. Pay, Bellefontaine.....Tiffin, Oct. 26-27		
Allen.....	C. D. Gamble, Lima.....	E. C. Yingling, Lima.....1st and 3d Tuesdays
Auglaize.....	W. S. Stuckey, Wapakoneta.....	C. L. Mueller, Wapakoneta.....3d Thursday, monthly
Hancock.....	J. A. Kimmell, Findlay.....	Nellie B. Kennedy, Findlay.....1st Wednesday, monthly
Hardin.....	D. H. Bowman, Kenton.....	W. A. Belt, Kenton.....1st Thursday, monthly
Logan.....	J. W. Croft, West Liberty.....	Carrie Richeson, Bellefontaine.....1st Friday, monthly
Marion.....	C. W. Sawyer, Marion.....	Maude L. Bull, Marion.....1st Tuesday, monthly
Mercer.....	J. P. Simons, Rockford.....	D. H. Richardson, Celina.....2d Tuesday, monthly
Seneca.....	C. F. Daniel, Tiffin.....	E. H. Porter, Tiffin.....3d Thursday, monthly
Van Wert.....	C. G. Church, Van Wert.....	N. E. Leake, Van Wert.....2d and 4th Monday; monthly
Wyandot.....	Frederick Kenan, U. Sandusky.....	B. A. Moloney, U. Sandusky.....1st Thursday, monthly
<b>Fourth District</b> .....(With Third District in Northwestern Ohio District).....Tiffin, Oct. 26-27		
Defiance.....	J. J. Reynolds, Defiance.....	D. J. Slosser, Defiance.....2d Wednesday, bi-monthly
Fulton.....	C. F. Hartman, Wauseon.....	P. S. Bishop, Delta.....Semi-monthly
Henry.....	Charles Mowry, Napoleon.....	C. H. Skeen, Napoleon.....3d Wednesday, monthly
Lucas.....	E. W. Doherty, Toledo.....	J. F. Wright, Toledo.....Friday, each week
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore.....2d Thursday, monthly
Paulding.....	L. R. Fast, Paulding.....	J. U. Fauster, Paulding.....3d Wednesday, monthly
Putnam.....	P. D. Bixell, Pandora.....	H. A. Neiswander, Pandora.....1st Thursday, monthly
Sandusky.....	C. R. Pontius, Fremont.....	C. I. Kuntz, Fremont.....last Thursday, monthly
Williams.....	C. M. Barstow, Bryan.....	J. A. Weitz, Montpelier.....2d Thursday, each month
Wood.....	J. C. Aurand, Weston.....	H. W. Dierksheide, Pemberville.....2d Thursday, monthly
<b>Fifth District</b> .....(No District Society)		
Ashtabula.....	W. H. Leet, Conneaut.....	B. C. Eades, Conneaut.....2nd Tuesday, monthly
Cuyahoga.....	R. H. Birge, Cleveland.....	Lester Taylor, Cleveland.....Every Friday evening
Erie.....	F. F. Lehman, Sandusky.....	F. J. Leblicq, Sandusky.....Last Thursday, monthly
Geauga.....	J. A. Heeley, Parkman.....	Isa Teed-Cramton, Burton.....2d Thursday, Jan., March, July and Sept.
Huron.....	R. L. Morse, Norwalk.....	W. W. Lawrence, Norwalk.....2d Thursday, monthly
Lake.....	W. P. Ellis, Painesville.....	E. S. Jones, Painesville.....1st Monday, monthly



Societies	President.	Secretary.	
Lorain.....	W. A. Pitzele, Lorain.....	R. A. Pease, Lorain.....	2d Tuesday, monthly
Medina.....	M. F. Miller, Wadsworth.....	H. P. H. Robinson.....	3d Wednesday
Trumbull.....	Walter W. McKay, Warren.....	John D. Knox, Warren.....	3d Thursday monthly except June, July and August
<b>Sixth District</b> .....	J. H. Seiler, Akron.....	John G. Wishard, Wooster.....	2d Tuesday in February, Aug- ust and November
Ashland.....	C. C. Patton, Ashland.....	W. M. McClellan, Ashland.....	1st Tuesday, Jan., March, May, July, Sept., Nov.
Holmes.....	J. C. Elder, Nashville.....	A. T. Cole, Millersburg.....	1st Tuesday, monthly
Mahoning.....	W. E. Ranz, Youngstown.....	H. E. Patrick, Youngstown.....	3d Tuesday, monthly
Portage.....	S. U. Sivon, Ravenna.....	E. H. Knowlton, Mantua.....	2d Thursday, monthly
Richland.....	John Burns, Mansfield.....	Chas. R. Keller, Mansfield.....	3d Thursday, monthly
Stark.....	Perry King, Alliance.....	George S. Hackett, Canton.....	3rd Tuesday, Jan., March, May, July, Sept., Nov.
Summit.....	D. W. Stevenson, Akron.....	U. D. Seidel, Akron.....	1st Tuesday, monthly
Wayne.....	A. O. Smith, Wooster.....	J. R. Jameson, Wooster.....	2d Tuesday, Jan., April, July, Oct.
<b>Seventh District</b> .....	J. W. Collins, Toronto.....	J. R. Mossgrove, Steubenville..	
Belmont.....	D. D. Piper, Shadyside.....	J. S. McClellan, Bellaire.....	2d Wednesday, monthly, at 1:45 p. m.
Carroll.....			
Columbiana.....	P. C. Hartford, E. Palestine.....	J. M. King, Wellsville.....	2d Tuesday, monthly, alter- nately, in Lisbon, Salem and E. Liverpool
Coshocton.....	Jesse McClain, Coshocton.....	J. D. Lower, Coshocton.....	4th Thursday, April, June, Sept., Dec.
Harrison.....	H. I. Heavilin, Cadiz.....	R. P. Rusk, Cadiz.....	1st Wednesday, monthly
Jefferson.....	V. B. Di Loreto, Steubenville.....	J. R. Mossgrove, Steubenville..	2d Tuesday, monthly
Monroe.....		J. H. Pugh, Woodsfield.....	2d Wednesday, monthly
Tuscarawas.....	H. A. Coleman, N. Philadelphia..	E. D. Moore, N. Philadelphia..	1st Tuesday, monthly
<b>Eighth District</b> .....	J. G. McDougall, N. Lexington..	Robert Miller, Hemlock.....	Athens, Sept. 7
Athens.....	J. M. Higgins, Athens.....	T. A. Copeland, Athens.....	1st Tuesday, monthly
Fairfield.....	J. H. Axline, Lancaster.....	C. H. Hamilton, Lancaster.....	2d and 4th Tuesday, monthly
Guernsey.....	Fred W. Lane, Cambridge.....	F. M. Mitchell, Cambridge.....	1st and 3d Tuesday each month
Licking.....	C. J. Loveless, Granville.....	W. E. Shrontz, Newark.....	Last Thursday, monthly
Morgan.....	C. V. Davis, Pennsville.....	C. E. Northup, McConnelsville..	1st Wednesday, monthly
Muskingum.....	D. J. Matthews, Zanesville.....	Maurice Loebell, Zanesville.....	1st Wednesday, monthly
Noble.....	G. H. Zimmerman, Belle Valley J.	L. Gray, Caldwell.....	1st Thursday, monthly
Perry.....	F. J. Crosbie, Junction City.....	C. B. McDougal, N. Lexington..	3d Thursday, monthly
Washington.....	C. J. Scott, Marietta.....	F. E. McKim, Marietta.....	2d Wednesday, monthly
<b>Ninth District</b> .....	C. E. Holzer, Gallipolis.....	Milo Wilson, Gallipolis.....	Gallipolis, Oct. 7.
Gallia.....	C. G. Parker, Gallipolis.....	Milo Wilson, Gallipolis.....	1st Wednesday, monthly
Hocking.....	O. V. Donaldson, Gore.....	M. H. Cherrington, Logan.....	
Jackson.....	W. H. Parker, Wellston.....	A. G. Ray, Jackson.....	1st Tuesday, monthly
Lawrence.....	T. H. Remy, Ironton.....	E. E. Ellsworth, Ironton.....	1st Thursday, monthly
Meigs.....	P. A. Jividen, Rutland.....	L. A. Thomas, Middleport.....	1st Wednesday, April, July and Oct.
Pike.....	O. C. Andre, Waverly.....	L. E. Wills, Waverly.....	1st Monday, monthly
Scioto.....	Wm. A. Ray, Portsmouth.....	Harry Rapp, Portsmouth.....	2d Monday, monthly
Vinton.....	O. S. Cox, McArthur.....	H. S. James, McArthur.....	4th Wednesday, monthly
<b>Tenth District</b> .....	Ralph W. Holmes, Chillicothe..	James A. Beer, Columbus.....	Chillicothe, Sept. 9
Crawford.....	H. H. Hartman, Galion.....	M. L. Helfrich, Galion.....	2d Thursday, monthly
Delaware.....	F. V. Miller, Delaware.....	V. B. Weller, Delaware.....	1st Friday, each month
Franklin.....	C. W. McGavran, Columbus.....	James A. Beer, Columbus.....	1st four Mondays
Knox.....	H. W. Blair, Mt. Vernon.....	J. R. Claypool, Mt. Vernon.....	2d and 4th Wednesday, from March to middle of Dec.
Madison.....	G. M. Kerr, West Jefferson.....	M. L. Naughton, London.....	4th Thursday
Morrow.....	R. L. Pierce, Mt. Gilead.....	Carl E. Neal, Cardington.....	1st Wednesday, monthly
Pickaway.....	J. B. May, New Holland.....	D. V. Courtright, Circleville..	1st Friday, monthly
Ross.....	G. E. Robbins, Chillicothe.....	G. S. Mytinger, Chillicothe.....	1st Tuesday, monthly
Union.....	H. G. Southard, Marysville.....	F. C. Calloway, Marysville.....	2d Tuesday

## NEWS NOTES OF OHIO

**Malvern**—Dr. John A. Rhiel, Major, M. R. C. who has been on duty at Columbus Barracks since August, 1917, has received his honorable discharge.

**Lucasville**—Dr. J. R. Hilling, a former resident of this village, has moved to Columbus Grove, where he is located in the office of Dr. Frank Morris, who has gone to California.

**Delaware**—Dr. Percy K. Holmes, for three years head of the department of physical education at Ohio Wesleyan University, has accepted a position as director of the department of public health and hygiene at the University of Kentucky.

**New Waterford**—Mrs. S. P. Patterson, wife of Dr. S. J. Patterson, died of apoplexy at her home here, July 28.

**Beaver**—Dr. E. W. Tidd, for many years a practitioner in Stockdale, has moved to this village.

**New Washington**—Dr. W. W. Lucas recently completed an eleven months post-graduate course at the Manhattan Eye, Ear and Throat Hospital, New York City.

**Columbus**—Announcement has been made that Dr. Charles H. Hoffhines will be added to the faculty of Ohio State University College of Medicine as assistant professor in ophthalmology, and Dr. Frank T. Gallen as assistant surgeon.

**Bellefontaine**—Dr. J. H. Wilson, dean of the local medical profession, suffered a stroke of paralysis, affecting his right side, July 14.

**Mt. Vernon**—Dr. E. D. Dowds moved from this city to Shelby, where he has taken over the practice of Dr. W. D. Coffman. The later will engage in post-graduate study in New York, but does not expect to return to Shelby.

**Middleport**—Dr. S. A. McCullough has been appointed Meigs County medical examiner for the War Risk Insurance Bureau by the United States Public Health Service.

**Delphos**—Dr. A. E. Jones, formerly of Wetsel, Van Wert County, has located here and is associated in practice with Dr. J. R. Tillotson. Dr. Tillotson will move to Lima in the fall, but in the meantime will divide his time between his local practice and an office recently opened in Lima.

**Middletown**—Dr. Mabel Gardner has returned home after an absence of two months, during which she attended the Mayo Clinic at Rochester and took other post-graduate work in Chicago.

**Cincinnati**—Dr. Joseph T. Kennedy has received his honorable discharge from military service at Camp Jackson, South Carolina, and resumed practice in this city.

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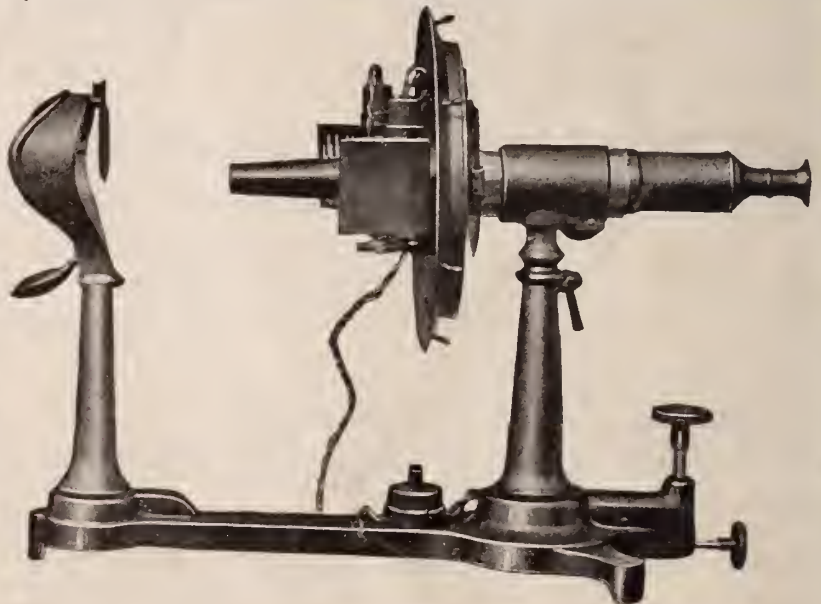
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Telephones: Ohio State 4905; Bell Main 5259

This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.  
Issued under the direction of the Publication Committee.

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## EDITORIAL COMMENT

by D. K. M.

### Civic and Political Duty

The average busy physician is occupied day and night with professional cares in distinct contrast from the ordinary business man whose active duties are confined to the day-time, and who if he wills, has time to devote to consideration of matters of public life. Nevertheless, physicians undoubtedly owe a duty to the public in utilizing their special knowledge in the way of educational and instructive work for the benefit of the state and in the interests of public welfare.

With acceptance of the above text it may be stated that it devolves upon the members of the medical profession to take an active part in the necessary preliminary measures for the selection of qualified men for public service.

Bills and proposals have been and are being prepared for introduction in the next Ohio legislature by various bodies of disgruntled individuals whose purpose is to abolish or emasculate present laws enacted to protect and promote the public welfare.

Attention has been called through this *Journal* and otherwise to vital issues which will develop in the next legislature, and while the organized profession and *The Journal* have in the past and will in the future continue to avoid any partisan political issues, there is justification and even a duty carefully to scrutinize candidates for public office, particularly those whose function it is to enact, amend and repeal the laws of Ohio.

Based on past record, the medical profession in two widely separated communities in the state voiced opposition to the renomination of two legislative candidates at the recent primaries. There cannot, however, be any accusation of partisan participation as in one case the candidate was a Republican and in the other a Democrat.

Rather than give the profession credit for the unselfish and public spirited motive actuating this activity, the lay press unfairly accused the profession of overstepping its proper function.

Lack of gratitude cannot, however, be justification for failure to assume a duty which conscience and justice demands.

### Prohibition Prescriptions

Because "news" is something "out of the ordinary" may be the reason why much has been said in newspapers recently concerning wholesale "liquor prescriptions." Much of this so-called news, however, voiced by prohibition officers and published by newspapers, is obviously unfair to the medical profession as a whole. In a recent facetious and would-be humorous article in one of the Capital City's newspapers dealing

with the diagnosis feature of liquor prescriptions, the broad statement is made that "State Prohibition Director Shearer revokes many licenses weekly because physicians have not lived up to the Federal law."

If one out of 100 physicians gets into trouble with the prohibition commissioner because he has unlawfully, wilfully, or unknowingly violated the law, the other 99 should not be the butt for ridicule or censure. As a body, physicians are generally held in higher regard than the members of any other profession. They are entrusted not only with the most sacred confidences, but with the very lives of their patients. It is no fault of the great majority if one man out of many has no sense of honor, no regard for law, and an itching palm. This type of outlaw deserves punishment and by all means let him get his deserts.

Perhaps one reason the physician is made the goat in such publicity is because the record system makes it easier for the federal officers to check up on the physician than it does to apprehend the bootlegger.

It may be safely assumed that the liquor secured for beverage purposes on physicians' prescriptions is infinitesimal compared to the entire traffic in such outlaw beverages.

Records on many arrests and police court prosecutions in cities and towns of Ohio indicate that "stomach bitters," "tonics," and other preparations under the guise of medicines constitute the chief "piece de resistance" for the thirsty.

The point is this—if much or most of the intoxicating concoctions being consumed is "patent medicine" with little or no therapeutic value, frequently harmful when consumed in quantities, rulings should be promoted to correct this evil. If necessary the law should be modified. Ordinances prohibiting the sale of patent medicines used as a substitute for intoxicating liquors, and for the licensing of all stores and places of business which sell them, might be a step in the right direction.

If the liquor traffic is a poisonous vine let's not merely cut off a few leaves but take out the root.

#### In Re Health Insurance

Judging by the increased activity of various groups of social welfare workers and so-called "experts" a serious and forceful attempt will be made during the coming months to force upon the people of at least several states the proposed scheme for compulsory state health insurance, fostered and advocated in a national way by the American Association for Labor Legislation.

In spite of the fact that Samuel Gompers, president of the American Federation of Labor, declares "that the fundamental fact stands out paramount that social insurance cannot remedy or prevent poverty" and other national leaders agree

with him in his opposition to the scheme, numerous local labor unions and several state labor federations have unwittingly been misled into an endorsement of the health insurance proposal.

The problem cannot be easily disposed of by assuming that because "industry is opposed, labor is opposed, the medical profession is opposed, and if the three groups directly affected are not for it, then it will not come."

A fuller presentation of the present situation together with pertinent comments will be found on page 763 of this issue.

#### Industrial Nursing Problem

An editorial in the August issue of *Modern Medicine* treats of the tendency, sometimes unintentional, among industrial nurses throughout the country to violate the Medical Practice Act by exceeding their rights as registered nurses in treating and prescribing for patients. The matter is appropos in Ohio, where a number of instances of this kind have recently come to light, and where the Attorney General not long ago clearly defined the limitations of such nurses to emergency treatment and ministrations under the direction of a physician. (Reproduced in this *Journal*, February, 1920, page 134).

In Rhode Island the State Board of Medical Registration undertook to curb this practice by directing a bulletin to all employers of industrial nurses in the state, calling attention to the provisions of the law and soliciting the cooperation of the employers in complying. Commenting on the problem, *Modern Medicine* says:

"The work of industrial nurses is naturally varied. Each plant and each industry is a separate problem requiring distinctive individual methods of solution. Industrial nursing has been of rapid and recent growth. Nevertheless, the ultimate standardization of methods, records, equipment, and restrictions will soon evolve and will result in greater efficiency and safety, both to nurses and employees.

"The bulletin is rightly addressed to the employers of industrial nurses, and not to the nurses themselves. The industrial nurse is an agent of the employer, and in no two places are her duties and responsibilities the same. Her service is often curtailed or misdirected because her employer has little idea what a well trained nurse can do for his industry, employees, and the community. For other employers her scope of activities is broad; and many industrial nurses find the giving of 'first aid' in the factory only a small part of their most valuable service. They are doing sanitary inspection, accident prevention work, visiting nursing, and the caring for the sick in their homes, teaching the lessons of right living, prevention of disease, and elementary nursing principles in homes, factories, and schools. They supervise lunch rooms, rest rooms, and recreation centers. They make Americans out of foreigners.

"Industrial nurses are public health nurses, and one of the most fundamental principles of public health nursing is that a doctor shall be in attendance on every case cared for; that the cases shall belong professionally to the doctor, not to the nurses; and that the nurse shall never



take upon herself duties or responsibilities rightly belonging to the physician.

"There is no reason why industrial nurses should carry any responsibility not usually assumed by other public health nurses. The leaders of industrial nursing have consistently stood for the employment of factory physicians and for the use of standing orders. Most graduate nurses realize that industrial nursing is in a creative period, and the present-day industrial nurses have the power to create and build standards and prove that they are an indispensable part of a system designed to provide better health for industrial workers.

"While trying to place the blame where it belongs for a condition existing not alone in one state but in all where industrial nurses are being employed, we must not neglect the fact that many nurses young and new in the work are not properly directed by the plant physician. Many times industrial physicians are too willing to relegate important functions to the industrial nurse; and the nurse, often new and poorly trained, foolishly accept these responsibilities.

"We must not fail, while discussing this industrial nurse situation, for the sake of future industrial nursing, to express the earnest hope that the bulletin will serve as a drastic warning to those nurses who may be well trained but careless, and to those poorly trained and ignorant of the fact that leading nurses, with knowledge and vision, and nursing organizations, do not sponsor or approve of nurses who, either by their own voluntary act or through the requirements of their employers, in any way violate the Medical Practice Act.

"These nurses retard seriously the growth and development of industrial nursing, and at the same time place themselves in danger of legal prosecution."

#### Attention, Officers, Attention!

Greene County Medical Society is one of those progressive organizations with hustling officers who formulate their program a year in advance and thereby assure good attendance at monthly meetings. The society issues a neat booklet containing a roster of the membership and a schedule of the speakers for the meetings during the coming year. When a member is sorely tempted to pass up a meeting he refers to said booklet and forthwith cranks the Ford—there's a treat in store he can't afford to miss.

For example, the program just prepared by Secretary Reyburn McClellan and President Reed Madden of that society, covers the period from September 2, 1920, to December 1, 1921, and in addition to interesting papers by local men includes addresses on a variety of subjects by representative physicians of Cincinnati, Columbus, Cleveland and other cities.

The officers endeavor to find out what the membership likes and then give 'em more of it. The symposium method of presenting the subject of influenza met with success last spring, so the new program devotes two meetings to symposiums, one on "The Group Idea in Medicine" and the other on "Anesthesia." Ten o'clock in the morning has been found a convenient time to hold meetings and has the advantage of permit-

ting a continuation of the discussion at friendly noon luncheons which follow the business and scientific sessions. Two meetings during the coming year will be held outside of Xenia, the county seat, as an experiment to increase attendance from the smaller towns.

#### More Fallacy

Not content to claim cures for all possible bodily afflictions, chiropractors are becoming more blatant in their unwarranted claim of "convicts."

A recent chiropractic advertisement contained the following statement:

"With ten thousand chiropractors in the United States alone; with over a million people in the United States taking adjustments daily, it cannot be logically argued that this is a fad that will fade in a day."

If one million people take daily treatment from ten thousand such practitioners this would mean that each chiropractor treats 100 patients a day. At an average of \$3.00 a treatment, this would mean that each of the ten thousand practitioners has an average income of \$300 per day, or more than \$100,000 a year. Even allowing for Sundays off, vacations and holidays, the radical statement quoted above means that the chiropractors' income approaches a billion a year.

The writer is willing to wager his year's income against a lead nickel that there is an equal disparagement between the chiropractic figures and the income tax return made to the Federal government.

While unimportant in itself, such statements further prove the exaggerated inconsistencies of these charlatans.

#### Passing of Dr. Reeve

Just as the pages of this issue closed word came of the death of Dr. John C. Reeve, pioneer Ohio physician and president-emeritus of the State Association, at his home in Dayton on September 14, at the age of ninety-four years. A biography of Dr. Reeve's life was published in the *July Journal*, following his election as the Association's first president-emeritus, an honor well deserved. While news of his death brings sorrow to the entire profession of this state, his was a long and brilliant life which will ever serve as a worthy example to disciples of scientific and ethical medicine. Provisions of Dr. Reeve's will bequeathed his brain to the medical department of Cornell University for research.

#### Do It Now

If you anticipate reading a paper before the State Meeting next May, now is the time to make known your desire to the officers of the section in which your subject belongs. Advance plans are already being made for the meeting and section officers are receiving applications for

places on their programs. They have been notified by Council that their completed programs must be in the hands of Dr. S. J. Goodman, chairman of the program committee of Council, by February 20.

The title of a paper must be furnished when an essayist accepts a place on the program and should be accompanied by an abstract containing not less than thirty nor more than one hundred and fifty words. Such titles as "paper by Dr. So-and-So," "subject selected later" or "title unannounced" will not be accepted, as it has been the experience that if an essayist does not know the title of his paper at least four months in advance of the meeting, it will be of little value to the Association.

For the convenience of those who wish to communicate with the section officers the following list is given:

**MEDICINE**—Chairman, Dr. L. A. Levison, 421 Michigan Street, Toledo; Secretary, Dr. C. L. Cummer, Rose Building, Cleveland.

**SURGERY**—Chairman, Dr. W. D. Haines, 1606 Freeman Avenue, Cincinnati; Secretary, Dr. Howard Stitt, Washington C. H.

**OBSTETRICS AND PEDIATRICS**—Chairman, Dr. W. D. Fullerton; Secretary, Dr. W. R. Barney; both Osborn Building, Cleveland.

**EYE, EAR, NOSE AND THROAT**—Chairman, Dr. D. T. Vail, 24 East Eight Street, Cincinnati; Secretary, Dr. W. W. Alderdyce, 513 Madison Avenue, Toledo.

**DERMATOLOGY, PROCTOLOGY AND GENITO-URINARY SURGERY**—Chairman, Dr. A. Ravogli, 5 Garfield Place, Cincinnati; Secretary, Dr. Hugh Baldwin, 347 E. State Street, Columbus.

**NERVOUS AND MENTAL DISEASES**—Chairman, Dr. R. Harvey Cook, Oxford; Secretary, Dr. Charles W. Stone, Rose Building, Cleveland.

**HYGIENE AND SANITARY SCIENCE**—Chairman, Dr. G. E. Robbins, Chillicothe; Secretary, Dr. R. R. Richison, City Health Department, Springfield.

### National Health Department

The approach of election has brought from the various candidates for office a multitude of welfare ideas contemplated to get votes, and incidentally "save the nation;" outstanding is that advocating the establishment of a federal department of health, to be in charge of a competent medical man who shall be a member of the President's cabinet.

There is no doubt that this proposal if properly directed has the indorsement of the physicians of Ohio, who for years have decried the lack of co-ordination in federal health administration and between federal and state health agencies. Advocacy of the plan by certain political candidates has evolved much discussion within the profession. In a recent interview Dr. A. W. Freeman, State Health Commissioner, declared that his department believes firmly in the necessity of es-

tablishing a national health department under the direction of a cabinet officer. He said:

"There is great and pressing need for the federal government to cooperate with the states in building up an effective organization for protecting the health of the people. This cannot be done so long as the health activities of the government are scattered through thirty-three divisions and bureaus of the government, in seven different departments.

"Under the present system responsibility, authority and resources are so divided that no federal agency can do even relatively effective work in health matters. The different government agencies do not and cannot from the nature of government bureaus cooperate in formulating a national policy of health protection, and in giving a really effective and comprehensive service.

"The federal department of health, were it established, could at once begin the work of bringing all health work, both by the national and state governments, to the highest pitch of efficiency. Ohio has taken long strides in developing a really effective system of health protection and we believe will soon have the best health system in the country, but so long as there are states which do not develop effective systems we are liable to suffer from the spread of disease arising in them, which do not unfortunately recognize state lines.

"As an example of the present system of handling federal health affairs the Children's Bureau, which was created to serve the mothers and children of the country, was placed in the department of commerce and has no connection with the Public Health Service, which is the official governmental agency, which has direct relationship with the health authorities of the various states.

"At the present time of the enormous expenditures of the federal government ninety cents of every dollar is spent for war, past or future. Of the remaining 10 cents only two cents is spent directly for those things which effect the health and welfare of the people."

The nation as a whole has failed to realize that the health of its people is its most valuable asset. It has spent hundreds of dollars in maintaining agencies to improve the health of cattle and increase the production of high grade stock, to each dollar for the protection of human lives. It is high time that our national mind absorbed the fact that sound health is the first requisite of the human beings who successfully raise the prize pigs and do the other things that make the wheels turn.

Within the last two years Ohio has enacted legislation which places it in the front ranks in the matter of health conservation. But, as Dr. Freeman says, health is an inter-state commodity and Ohio must have the guidance of the federal government and the cooperation of every other state in the Union if it is to accomplish a maximum of good.

### Cooks Is Cooks

The Civil Service Commission of New York advertises for a cook at a salary of \$2,500 per annum and a chemist skilled in pathology at a salary of \$950 per annum.—Luke McLuke.



# The Causes and Treatment of the Conditions Underlying High Blood Pressure\*

Lewellys F. Barker, M.D., Baltimore, Md.

Professor of Clinical Medicine, Johns Hopkins Medical School

**Editor's Note.**—High blood pressure appears to depend chiefly, in Dr. Barker's estimation, upon a narrowing of the lumina of the arterioles in the precapillary areas. It is at first functional and due to hypertonus of the arteriolar musculature, though later it assumes a partly organic character due to arteriolar sclerosis. Chronic renal disease, exogenous and endogenous poisons, infectious processes, the wear and tear of life, abnormal metabolic states, endocrine disorders and certain types of constitutional make-up have been much discussed as actual causes of high blood pressure. The different types of chronic arterial hypertension probably represent different stages in the development of the same fundamental process, which may advance with variable rapidity and with variable associated involvements of cardio-vascular, renal, cerebral and other structures in different cases. When recognized early the process may often be wholly arrested; or so delayed in its progress that patients may live comfortably for many years before troublesome symptoms or dangerous complications occur. In the later stages of the process much can be done to ameliorate symptoms and to ward off dangers, though in the actual end-stages both patients and physicians do better bravely to face reality, accepting the inevitable, rather than through wishful thinking to increase suffering by resort to meddlesome therapy that attempts the impossible. To prevent the development of the pathological process underlying high blood pressure, concludes Dr. Barker, one should first "get himself well born without constitutional inferiorities," and then should avoid intoxications and infections and satisfy his physical, economic, social, educational, aesthetic and ethical desires in a well-balanced way, so ordering his activities that he will secure the highest self-realization possible in the service of the society in which he lives.

## INTRODUCTION

WHERE there is ignorance, fear is prone to lurk, and one of the dangers of a little knowledge may be the accentuation of fear. A man can often be bold when he knows precisely the realities that he must face, but he may "drop his heart into the sink of fear" if he seriously mistrusts his body and be compelled to live under the threat of some uncertain peril. Now that blood-pressure measurements have become routine in the examination of patients and of applicants for life insurance, the frequency of the existence of high blood pressure, especially in persons of middle age, has become, not only among medical practitioners but also among the laity, matter of common knowledge. Certain very grave conditions—contracted kidneys with uraemia, arteriosclerosis with cerebral apoplexy, enlargement of the heart with failure of the heart muscle and dropsy—are, as is also now well known, often preceded by high blood pressure. Hence the discovery that the blood pressure of a patient is increased may excite the fear that one or another of these serious complications may be imminent. And though recent experience has made it sufficiently clear that these much dreaded states rarely appear except in the terminal stages of a process that for lustra, or, in some instances, for decades, may remain benign, still the knowledge of the incapacitation or of the fatality to which the process may lead, the difficulty of being sure of the exact stage in which the process exists when it is found or of the precise extent of the alterations that have already occurred in or-

gans like the brain, the heart and the kidneys, the extreme variability of the course of the underlying disease in different cases, the ignorance that still exists regarding its causation, and, finally, the persistence of the increase of blood-pressure and of the conditions underlying it in many cases despite careful treatment, all conspire to maintain anxiety in the physician who discovers a high blood-pressure and in the patient in whom he finds it, and to make both "lodge in fear."

Knowledge concerning high blood pressure and its attendant circumstances has, however, been growing rapidly and the literature of the subject has increased proportionally, and since recognition of high blood-pressure and the management of patients exhibiting it are among the most important tasks in present-day medical practice, it is desirable that we should, from time to time, take stock of the facts that have been accumulated and of the inferences that have been drawn from them. During the past fifteen years it has fallen to my lot as a medical consultant to see a large number of patients in whom high blood-pressure was manifest, and to observe them in all stages of the process from the very beginning of the changes thus far recognizable, through the various intermediary stages, to the several ends to which it may advance. As you have requested it, I am glad to review my personal experience, clinical and pathological, with high blood pressure and its bases, and to try to formulate for you my present impressions of causes and treatment based upon this experience and upon a study of the bibliography. And I dare say that a review of your own experience will, like that of mine, convince you that, though we already know a great deal regarding high blood pressure and its

\*The address on Medicine delivered before the General Session of the Ohio State Medical Association, during the 74th Annual Meeting, Toledo, June 2, 1920.

causes, our ignorance of the subject is still more impressive than our knowledge. We are still far from that perfect acquaintance with it that is needed to dispel, or at least to permit us satisfactorily to control, our fears.

#### FACTORS IN THE PHYSIO-PATHOLOGY OF ARTERIAL TENSION

The students of *normal physiology* have investigated the several factors upon which arterial tension depends. They have shown us, as you know, that they include (1) the distensibility of the vessel wall; (2) the capacity of the vascular system, and (3) the degree of filling of the vessels, the latter depending upon (a) the volume of flow (in turn dependent upon the action of the left ventricle of the heart), and (b) the degree of resistance encountered (either through the viscosity of the blood or, more important, at the arteriolar barrier in the precapillary area.) In normal states the changes in the width of the lumina of the arterioles depend upon the tonus maintained in their muscular walls and this in turn is regulated, partly by a very complex vasomotor nervous system (consisting of the vasoconstrictor and vasodilator nerves of the vegetative nervous system under the control of peripheral, spinal and bulbar centers and subject to both pressor and depressor reflex stimulation), partly by direct chemical stimulation of the muscular walls, or of the nerve-endings in them, by materials of endocrine, or other metabolic origin. The physiologists have shown us, too, how these several factors may undergo alterations, in normal circumstances, with a resultant general rise, or general fall, of blood pressure, and, more particularly, they have pointed to the mechanisms that are concerned in the provision of those alterations of local blood supply and of local blood pressure that correspond to local physiological needs.

The students of human *pathological physiology*, in their turn, have shown us that the changes in blood pressure in disease depend, in largest part, upon changes in the caliber of the arterioles, though, in less degree, alterations of volume flow, of viscosity, and of other factors, may also be operative. They have supplied us with a host of facts bearing upon the mechanical, the chemical and the neural conditions that may be associated with temporary or permanent increase, or decrease, of the arterial tension. There is now a great store of facts available for valuation, but the clinician who approaches this store will find it necessary, if he will avoid confusion, to familiarize himself not only with the dynamics of the circulation and the architectonics of the vasomotor nervous system, but also with the growth of modern knowledge concerning biological chemistry and metabolism.

Time will not permit me to do more than to hint at these fundamental factors of arterial tension as disclosed by students of normal and pathological physiology. Nor in this paper shall I attempt

to discuss acute or transitory hypertension, but shall limit my remarks to the subject of the clinical types of chronic arterial hypertension, their causation, and the management of patients presenting them.

#### THE GROUPS OF PATIENTS IN WHOM HIGH BLOOD PRESSURE IS MET WITH

For convenience of description, I shall divide the clinical cases of chronic arterial hypertension into four groups, and shall anticipate a little by saying that I regard these four groups as corresponding to four successive periods in the course of a pathological process that is common to all the cases, though susceptible to remarkable variations as regards rapidity of progress and associated conditions.

I. *Incipient Arterial Hypertension Often Accidentally Discovered.*—As the public has become educated to the importance of preventive medicine, more and more people, even when well or when suffering from only slight ailments, have turned to physicians for a periodical medical overhauling in order to make sure that they were well and living hygienically. General diagnostic surveys for prophylactic purposes now make up no small part of the work of general practitioners and consultants. The so-called "Life Extension Institute" has been organized with a similar idea in view. In the systematic examination of recruits for the army and navy, and in the examinations of applicants for life insurance, a great number of general diagnostic surveys have been made of supposedly healthy people. Every one knows how common it is to find, among patients applying for these examinations, a maximal blood pressure between 140 and 160 mm., with, or without, a faint trace of albumin in the urine or a few casts in a centrifugalized specimen.

These persons with slight arterial hypertension may not be conscious of any unpleasant symptoms. On the contrary, they often look and feel unusually well. They state that they have better health, perhaps, than formerly and that they have noticed an increase of their feeling of well-being and working capacity during the period preceding the examination. They may be very active workers in business or in the professions; indeed the tendency of such persons is to scorn the forms of relaxation that men who do not enjoy robust health find necessary. The blood pressure in such instances is often variable, around the upper limits of normal. Doubtless some of the patients that the late Sir William Osler referred to in that remarkable paper written in 1901, entitled "On the Advantages of a Trace of Albumin and a Few Tube Casts in the Urine of Certain Men Above Fifty Years of Age," belong in this group. A similar paper might now well be entitled "On the Advantage of Discovering a Tendency to Slight Increase in the Blood Pressure in a Person of Any Age"; indeed, Dr. Osler himself wrote a paper, in 1912, on "High Blood Pressure; Its As-



sociations, Advantages and Disadvantages." It is truly fortunate for the hypertensive candidate when his malady is discovered in its incipency, for it is at this stage that preventive and arrestive measures can be instituted with the greatest prospect of success.

II. *Relatively Early Chronic Arterial Hypertension Without Other Obvious Signs of Renal or Arterial Disease (So-called Hyperpiesia, Essential Hypertension, Idiopathic Hypertension, Etc.)*—We come next to a group of cases in which there is outspoken arterial hypertension, the maximal pressure varying say between 160 and 190, the minimal pressure say between 70 and 100 mm. The apex beat of the heart is forcible, the aortic second sound is accentuated, the left ventricle is a little enlarged and the electrocardiogram reveals "left ventricular preponderance." There may be no sign of arteriosclerosis in the palpable arteries, and renal function, as revealed by studies of the urine and by the ordinary tests of renal function, may show but little or no impairment. The arterial hypertension in this group of cases may be discovered also wholly accidentally at a life insurance examination or on routine examination made when a patient has complained of some minor ailment. Some of these patients, however, may have begun to suffer inconvenience from the increase in the blood pressure. Thus, many of them complain of headache, or of a sense of fullness or pressure in the head, of transient dizziness, of lack of endurance, of irritability, and of sleeplessness (especially toward morning). Such symptoms are often grouped together under the title of "nervousness" or "neurasthenia," both by laymen and by physicians.

The tendency of the profession at the moment is to designate these cases of chronic arterial hypertension that show no other signs of arteriosclerosis or of disturbance of renal function, as "primary" or "essential hypertension" or "hyperpiesis." But when, in addition to hypertension, the radials are thickened and the temporals are visible and tortuous, a beginning "arteriosclerotic hypertension" is spoken of; and when albumin and casts persist in the urine of a hypertensive patient, the phenolsuphophthalein output is impaired and there is marked nocturnal polyuria with tendency perhaps to fixation of the specific gravity, a diagnosis of beginning "nephritic hypertension" is made. If you will permit me, I shall comment, a little later, upon the origin of these terms and upon the legitimacy of such a terminology.

III. *More Advanced Stage of Chronic Arterial Hypertension but Before the Appearance of Serious Complications*.—In the next group of cases the maximal blood pressure may be 200 mm. or more and the minimal 100 mm. or more. There is demonstrable hypertrophy of the left ventricle with ringing aortic second sound. The patients may have polyuria, both diurnal and nocturnal. The urine is usually pale and of low

specific gravity, and contains from time to time a trace of albumin and a few hyaline, or granular, casts. The specific gravity tends to become fixed (hyposthenuria) and there may be a slight increase in the non-protein nitrogen of the blood (azotemia). The phthalein test of renal function may show a normal output or even hyperpermeability, though in certain of the cases the output may be moderately reduced. The peripheral arteries (radials, temporals, brachials) may, or may not, be palpably thickened.

The patients in this group may, or may not, complain of troublesome symptoms. Very often the "neurasthenic" group of symptoms mentioned as occurring sometimes in Stage II is present in these patients and the majority of them, too, begin to feel the strain upon the heart muscle, complaining of a little dyspnoea on exertion. These patients may, however, still seem to enjoy robust health; indeed they are often congratulated by their fellows upon their obvious appearance of vigor. The condition in at least some of the patients of this group, too, is classed by some clinicians under the designation "hyperpiesis" or "essential arterial hypertension," though this designation would doubtless be restricted to the cases without palpable thickening of the peripheral arteries and without obvious renal decompensation.

IV. *Late Stages of Chronic Arterial Hypertension with Serious Complications (Cerebral, Cardiac, Renal, Etc.)*—The patients of Group II and III are prone, in my opinion, sooner or later to enter this fourth group in which any one of several possible complications appear. Since these complications are often dependent upon an associated arteriosclerotic process, upon an associated renal disease, or upon both, many clinicians of to-day place all the patients of this fourth group in the category of "arteriosclerotic hypertension" or of "nephritic hypertension." ("Nephropathic hypertension" would better express the meaning that is intended.) Thus, due to a cerebral arteriosclerosis, there may be a sudden cerebral hemorrhage with apoplectic stroke; or, due to a retinal arteriosclerosis, there may be retinal hemorrhages with amblyopia or scotomata; or, due to an associated coronary sclerosis with insufficient nutrition of the heart muscle, there may be attacks of angina pectoris, of cardiac asthma, or of pulmonary oedema; or, due to the combination of impaired nutrition of the heart muscle with overwork of the heart in maintaining the chronic arterial hypertension, myocardial insufficiency may set in with all the signs of cardiac decompensation (dilatation of the heart, chronic passive congestion, dyspnoea, enlargement of the liver, oliguria, pronounced albuminuria, oedema of the lower extremities and general anasarca); or, due to associated lesions in the kidneys, renal decompensation may set in (especially in the course of an acute infection or of an associated myocardial insufficiency), and the patient may become ure-

mic, exhibiting the nervous symptoms (convulsions, temporary paralyses, disturbances of vision, twitchings, delirium, coma, headache, etc.), the digestive symptoms (anorexia, nausea, vomiting, hiccoughs, diarrhea), the cutaneous symptoms (pruritus, exanthems), or the blood findings (increased non-protein nitrogen, increased urea nitrogen, etc.), well known as concomitants of a uremic state. Is it not the renal and uremic complications, often terminating fatally and known by the laity as "chronic Bright's disease," that, together with the dangers of heart failure and of cerebral apoplexy, largely account for the dread of high blood pressure that so generally prevails?

#### CAUSATIVE FACTORS IN CHRONIC ARTERIAL HYPERTENSION.

Before discussing the causes of high blood pressure, let me say at the very beginning that we do not yet certainly know what they are. We do know a whole series of anatomical changes and of pathological physiological deviations from normal function that are met with in long continued chronic arterial hypertension. We are able to say fairly positively that the principal factor concerned in the actual production of chronic arterial hypertension lies in a diminution of the lumina of the small terminal vessels (arterioles) of the arterial system at its junction with the blood capillaries, that is to say in the precapillary area. We can also state positively that, in the early stages of the process, this diminution in the caliber of the small arterioles is due mainly, if not entirely, to a functional state in which a persistent hypertonus of the smooth muscle of the walls of these arterioles exists and that, in the later stages of the process, this functional hypertonus is associated with an organic narrowing (sclerosis) of these minute organ arterioles. But it must be admitted that, as yet, we remain in dense ignorance regarding the precise nature of the pathogenetic process underlying both this functional arteriolar hypertonus and this arteriolar sclerosis. Much keen speculation has been indulged in, many important clinical, chemical and neural observations have been made, and much well-directed experimentation on animals has been prosecuted. But, hitherto, in my opinion, the problem has not actually been solved. Not until we become able clearly to visualize in its entirety the mechanism (physical, chemical, biological) underlying the persistent functional arteriolar hypertonus and the developing organic arteriolar sclerosis in these patients dare we assume that we understand the condition.

It is not at all surprising that clinicians and pathologists first became acquainted with the end stages of this remarkable process, whatever it is, that is accompanied by chronic arterial hypertension, and that it was only recently that the earlier stages of the process could be more carefully studied.

When pathological anatomists were making their great contributions to gross organology and when clinicians were thinking mainly of the anatomical changes in the body underlying disease, pathological physiology was still a very undeveloped science and considerations of pathogenesis were necessarily limited in scope. At that period clinicians were profoundly impressed, and rightly so, with the fact that patients who showed contracted kidney along with hypertrophied heart at autopsy had presented during life a radial pulse that was difficult to compress (*pulsus durus*). When the apparatus for measuring blood pressure came into common use this increased tension of the pulse could be more exactly measured and the results were recorded. Similarly, clinicians were well aware of the fact that many of the patients who die of cerebral apoplexy have exhibited during life a hard pulse and high blood pressure, and that at autopsy, besides cerebral hemorrhages, a general arteriosclerosis is usually found. Very natural it was, then, to assume that the high blood pressure that had existed during life was in some way due to the chronic renal changes in the one group of patients or to the arterio-sclerotic changes in the other. Further, patients with chronic renal disease not infrequently die of cerebral hemorrhage, and clinicians and pathological anatomists began to link together (1) chronic renal disease, (2) arteriosclerosis, (3) cerebral apoplexy, and (4) chronic arterial hypertension with formation of the larger concept of "chronic cardiovascular-renal disease."

The therapeutic nihilism of that time, when gross pathological anatomy was in its hey-day and when even clinical enthusiasm was largely dominated by the anatomical conception of disease, was due largely to the emphasis placed both by pathologists and clinicians upon the study of the end-stages rather than upon the beginnings of disease. For the pathological findings in these end-stages and the clinical conceptions based upon them both contributed to therapeutic hopelessness, a hopelessness that was certainly justified by the experience of clinicians in their attempts to treat this great process in the stages then under their particular scrutiny.

During the past three decades, however, conceptions in internal medicine and in pathology have been undergoing a profound revolution. Pathological anatomy has been working back from the end-stages of disease and the corresponding gross organology through pathological histology to pathological histogenesis. Moreover, during this time, an almost new science of pathological physiology, based upon the application of physics, chemistry and biology to the problems of disease, has developed. And simultaneously, clinicians, no longer dominated solely by anatomical conceptions of disease, have become more and more interested in the functional changes that precede structural alterations. The adoption of the experimental method of approach and the



development of technical procedures that permit us to investigate the properties of matter and energy and of the action of the different forms of energy on matter have led in all domains to more precise quantitative studies that supplement the older more qualitative and impressionistic modes of research. Such functional studies by more exact methods have increased the interest of clinical workers and have contributed in a gratifying way to the progress of ideas of etiology, so that, today, we have better conceptions than ever before of the origin and development of disease processes, that is to say, of pathogenesis. And with the growth of our knowledge of etiology and pathogenesis have come new hopes for therapy. The old therapeutic pessimism, though still justified for end-stages, is fast giving way to therapeutic optimism, based partly upon success in prophylaxis and partly upon success in arresting, or delaying the progress of, abnormal processes that have become better understood and that can be recognized in their earlier stages. Thus, in the domain that interests us today, the discrimination of so-called "primary" or "essential hypertension," with its more favorable outlook, from so-called "arteriosclerotic" and "nephropathic hypertension," with their malign prognostic connotations, is, in my opinion, the result of, and an evidence of, the emphasis now laid upon the study of disease in its earlier stages. Clinicians are so glad to find that the outlook in certain cases of high blood pressure is less serious than was formerly supposed, that there is some danger, I think, that they may be led astray in the direction of thinking that these more benign types, or stages, of hypertension are wholly unrelated to the types, or stages, in which the prognosis is grave.

*High Blood Pressure and Chronic Renal Disease.*—There has been much difference of opinion regarding the cause of the high blood pressure in chronic renal disease, especially in the so-called "primary contraction of the kidneys," which is less a true nephritis than a renal atrophy due to sclerosis of the renal arterioles, especially of the afferent vessels of the glomeruli with resulting hyaline scarring of the glomeruli (*nephrocirrhosis glomerularis*) and disappearance of the corresponding tubules. It is in association with this condition, (wrongly designated "chronic interstitial nephritis," and which I am accustomed to call "arteriolar (sclerotic) nephropathy"), that the highest systolic and diastolic blood-pressures are clinically met with. But these high blood pressures could not possibly be due to the increase of the arteriolar barrier in the kidneys alone. It seems to be due rather to a narrowing of the lumina of the arterioles all over the body, to a general arteriolar constriction, partly of vasotonic origin, partly (at any rate in the later stages) of sclerotic origin. Two questions arise. (1) What is it that makes the musculature of the arterioles in the precapillary areas contract

in the first place? and (2) What is it that causes organic (sclerotic) changes to occur in the arterioles after a time, thus anatomically stabilizing a narrowing of the lumina that was at first only functional so that the high blood pressure becomes, so to speak, "set"?

Among those who believe that the lesions in the afferent vessels of the glomeruli are primary, there are some that think that, thence, a general hypertonus is reflexly stimulated; whereas others think that a general arteriolar hypertonus is produced through retention within the blood of poisons that the kidneys should eliminate, the chemical effect being exerted, either directly upon the arteriolar musculature throughout the body or indirectly upon it through the vasomotor nervous system.

It seems to me most probable that the origin of the initial hypertonus and of the arteriolar sclerosis must be sought still further back than in the renal lesions, perhaps in some normal vasoconstrictor substance present in excess, possibly in some other chemical substance not normally present in the body, or, perchance in some abnormal sensitization of the vasomotor system to reflex or to chemical stimuli.

*High Blood Pressure and Arteriosclerosis.*—High blood-pressure is often present in patients who show also arteriosclerosis of the palpable arteries (radials, brachials, temporals, etc.), but there is no constant relation between the degree of palpable thickening of the vessels and the height of either the maximal or minimal blood-pressure. Indeed, there are two very striking facts in this connection: (1) Patients may show extreme thickening and even calcification of the palpable arteries without increase of blood-pressure, and (2) Patients may long exhibit a maximal systolic blood-pressure of over 200 mm. Hg. without any thickening of the arteries accessible to palpation!

It seems to me very certain that sclerosis of the arterial system other than that involving the minute arterioles at the precapillary barrier has but little if anything to do with the production of high blood pressure. And there is some reason to believe, also, that even the sclerosis of the small organ arterioles may be secondary to high blood pressure or to what causes it, rather than that the initial increase in blood pressure is due to an arteriolar sclerosis. Once a high blood pressure has been maintained for a time and arteriolar sclerosis has begun, a vicious circle may be formed, the arterial hypertension favoring the progress of arteriolar sclerosis, and, in turn, the arteriolar sclerosis helping to maintain, to increase, and to "set," the arterial hypertension. The time seems to have come when the significance of sclerosis of the arterioles must be sharply discriminated from that of sclerosis of the rest of the arterial system. And when one uses the term "arteriosclerosis" he should, to avoid con-

fusion, make clear in each instance the part of the arterial system to which he is applying the term.\*

*"Primary" or "Essential Hypertension."*—Should this be sharply separated as a pathogenetically distinct type of chronic arterial hypertension, wholly unrelated to the conditions underlying the high blood pressure met with in cases of chronic renal disease and in cases of arteriosclerosis? I personally do not think so, for it seems to me probable that some common pathological-physiological process underlies all these chronic arterial hypertensions, however different the associated phenomena may be. It is desirable, of course, in studying a patient with high blood pressure to make such a general diagnostic survey as will reveal not only the important recognizable facts regarding the blood pressure, but also all recognizable deviations from the normal in all the bodily domains, for the abnormal blood pressure may be far less important for diagnosis, and for treatment, than the discovery of various other symptoms and signs—cardiovascular, renal, cerebral, metabolic, endocrine, etc.

If patients in whom the diagnosis of so-called "primary" or "essential hypertension" has been made and in whom the disease process has not been arrested at a relatively early stage by treatment be followed long enough, they will, I venture to say, be found sooner or later to suffer from the same kinds of "accidents," and ultimately will make their lethal exitus by the same routes (cerebral apoplexy, myocardial insufficiency, uremic poisoning, or terminal infection), as are characteristic of the histories of patients in whom a diagnosis of "arteriosclerotic hypertension" or of "nephropathic hypertension" has been made. All the more reason therefore to strive for ever earlier recognition of the existence of conditions that tend to the development of hypertensive states, in order that appropriate preventive measures may be timely instituted.

*High Blood Pressure and Wear and Tear.*—Clinicians have repeatedly pointed out that high blood pressure, arteriosclerosis, and "chronic Bright's disease" are common among persons who have been exposed for long periods to physical or mental overstrain, and, especially, among business men and professional men who have "burned the candle at both ends," leading hard-working, anxious lives, taking insufficient bodily exercise or recreation, and often, also, over-indulging the appetites—for food, for alcohol, for tobacco, for sexual gratification, for monetary gain, or for the possession of power or fame. The human machine is forced to run at such a high speed and under such a load that it soon becomes damaged by the abuse. With an equipment that rationally used and protected would suffice for seventy years of service, those persons keep the accelerator open all the time, injure the machinery, and find them-

selves in middle life compelled unwillingly to visit the repair shop. Why such preternatural wear and tear should in some men and not in others be followed by high blood pressure and associated conditions, we do not yet certainly know. The factors of wear and tear and their effects upon different constitutional make-ups must be submitted to more thorough analyses than have been possible hitherto before we shall be able to decide just how and where, in the susceptible, injuries to the body are received. The etiologist who strives to make such an analysis will do well to consider not only the physical and chemical insults to which the persons concerned are exposed, but also the psychic and social pressures incident to their mercurial careers.

*High Blood Pressure and Infections.*—Since infections of different kinds are capable of permanently injuring the internal organs of the body, notably the heart and the kidneys, it is reasonable to ask whether or not the hypertensive process may have its origin as a result of acute or chronic infection.

Typhoid fever, recurring tonsillitis, syphilis, influenza, and chronic local pyogenic infections (oral sepsis, paranasal sinusitis, cholecystitis, prostatitis, etc.), have all at one time or another been incriminated, but though any of these may doubtless contribute to "wear and tear," the definite evidence that they can be responsible for starting a chronic hypertensive process is still lacking.

I feel sure that syphilis especially has been much over-estimated as a causal factor in chronic arterial hypertension. A Wassermann reaction is made as a routine in every case that is referred to me for a general diagnostic survey. In 200 cases of abnormally high blood pressure seen at my office since March, 1919, only five (or 2½ per cent.), showed a positive Wassermann!

Chronic local infection is certainly very common in hypertensive patients. For example, in the 200 cases mentioned above, no less than 104 (over 50 per cent.), had one or more teeth showing periapical rarefactions sufficiently pronounced to make extraction advisable according to the reports received from expert dental consultants. Pyorrhea alveolaris was also present in a large number of these patients, as was also chronic tonsillitis. It must be remembered, however, that most patients with high blood pressure have reached the age when oral sepsis is very common. Thus only 16 of the above-mentioned 200 cases of high blood pressure were under 40 years of age. Because oral sepsis and high blood pressure are frequently found in the same patients is not proof that the two conditions are necessarily related to one another etiologically.

*High Blood Pressure and Intoxications.*—That high blood pressure and the conditions that are associated with it are due to chronic intoxication by exogenous or endogenous poisons is a belief that widely prevails. Among the exogenous poi-

\*[It has been suggested that high blood pressure may sometimes arise in extreme sclerosis of the aorta through destruction of the fibrils of the (afferent) N. depressor. The arguments pro and con can not be entered into here.]



sons that have been suspected as causal agents may be mentioned alcohol, tobacco, coffee, tea, and certain poisons of the industries (lead, mercury, zinc, etc. Among the endogenous poisons supposed to be etiologically important, especially by French physicians, are certain ptomaine and other putrefactive products arising in the gastrointestinal tract (so-called "auto-intoxication").

As far as *alcohol* is concerned, I have not been able to convince myself that it has played a rôle of any importance in the etiology in the patients with high blood pressure that I have personally studied. Nor could I find definite proof that the excessive use of *coffee* or *tea* had been responsible for the hypertension. With regard to *tobacco*, I am in doubt, though I am inclined to believe that the excessive use of tobacco may contribute to the production of arterial hypertension in susceptible persons. Undoubtedly, tolerance to tobacco varies much in different persons. If tobacco is one of the causal agents, we shall have to determine later, which of the several constituents of tobacco (nicotin, pyridin, pikolin, etc.) are of importance.

Workers in *lead*, *mercury* and *zinc* are said to show a high percentage of vascular disease (arteriosclerosis, hypertension), but I can say nothing from direct experience, since the patients I have studied have not been exposed to these intoxications.

"Auto-intoxication" from the *gastro-intestinal tract* was, at one time, so markedly "overworked" as an etiological agent and as an indication for therapy, that the profession in recent years has fought shy of the use of the term and the entertainment of the conception owing to its contemporary disrepute. Certain it is that many of my patients with high blood pressure have suffered from chronic constipation, and many of them, on roentgenological examination, have shown evidences of ileal, caecal, or colonic stasis. We may have gone too far in discrediting intoxication from the *gastro-intestinal tract* as a cause of hypertension. Certainly, if chronic constipation or other disorders of the digestive tract be found in patients with hypertension, corrective measures should be instituted.

*High Blood Pressure and Disorders of Metabolism and of the Endocrine Glands*—Attention has of late been directed to the possible relationship of metabolic and of endocrine disorders to chronic arterial hypertension.

It has long been known that patients with obesity, with diabetes mellitus, and with gout, tend to develop an arteriosclerotic process and also that many of them have high blood pressure. Among my last 200 patients with high blood pressure, some 69 were approximately of normal weight; some 76 were obese, and some 55 were more or less emaciated. Of the 76 obese patients, 34 were between 10 and 20 pounds, 14 between 20 and 30 pounds, 7 between 30 and 40 pounds, 9 between 40 and 50 pounds, 6 between 50 and 60 pounds, 4

between 60 and 70 pounds, 1 between 80 and 90 pounds, and 1 between 90 and 100 pounds, too heavy. Of the 55 more or less emaciated patients, 32 were between 10 and 20 pounds, 16 between 20 and 30 pounds, 5 between 30 and 40 pounds, and 2 between 40 and 50 pounds, below their calculated ideal weight as estimated by Clyde Guthrie's formula.

Some of the hypertensives have an increased rate of basal metabolism, some a decreased rate and many a normal rate. Diabetes mellitus and gout have been exceedingly uncommon among my high blood pressure patients. But every consulting physician has a peculiarly selected clientele and I dare say that Dr. Joslin of Boston, or Dr. Allen of New York would find a large number of diabetics among their last 200 hypertensives!

Endocrine disorders are common enough among hypertensives, but what the relations of these disorders of the thyroid, hypophysis, suprarenals, and gonads to hypertension are, if there be any, remains yet to be determined. My impression is, and I give it merely as an impression, that hyperthyroidism and gonadal (climacteric) disturbances may in some instance of chronic arterial hypertension be important accessory etiological factors. Some of the patients show an increased sensitiveness to epinephrin, but many of them are not especially hypersensitive to the Goetsch test.

*High Blood Pressure and Constitutional Make-Up.* The well-known fact that certain families may contain several members who develop arterial hypertension and die of apoplexy, angina pectoris, myocardial insufficiency or uremia at a relatively early age lends color to the view that hereditary and constitutional factors are of great importance in the etiology of the hypertensive states. In many of these families, the members exhibit certain physical and mental traits that are so characteristic that they are recognizable even by those who have not had a medical training.

You will often hear a layman say, "That man looks as though he would die some time of an apoplectic stroke," when he sees a person in whom these physical traits are pronounced. This physical constitution, known to the physician as the *habitus apoplecticus* is recognizable as a combination of stocky build, short, thick neck, red face, and tendency to obesity. Certain mental traits are almost as characteristic as the physical. Who does not know the tenseness, the irritability, the tendency to worry, the over-seriousness, the inability to play, the lack of systematic exercise and recreation, the concentration and circumscription of interests leading often to business or professional "success" to the sacrifice of a well-balanced life, so common among the hypertensives?

What is the constitutional inferiority that underlies this habitus? Our answer can be in general terms only—the germ plasm (with its Mendelian units), and the "make-up" into which,

through internal and external environmental influences, it develops. The human being that results has a circulatory system, a nervous system, and a metabolic and endocrine system of peculiar stamp, and this being differs in his susceptibilities and reactions to physical, chemical, psychic and social stimuli from human beings of more normal make-up.

A constitutional inferiority that is presented by another group of hypertensives is the tendency to *migraine*. This variety of headache is an exquisitely familial (and hereditary) disorder. Persons who suffer from migraine have labile vasomotor nervous systems and frequently become, in later life, arterial hypertensives.

Still another constitutional inferiority of interest in this connection is that of familial thyreopathy. The ranks of the hypertensives are, in my experience, to a considerable extent recruited from thyreopathic (and sympathicotonic) families.

If I am right in my impression, and this impression finds much support also in the bibliography, constitutional inferiorities of the vascular, the nervous, and the endocrine systems play then a very important rôle in the pathogenesis of chronic arterial hypertension, of atherosclerosis, and of chronic renal disease. I think it not impossible that, in the future, we shall pay more attention than we do now to the constitutional make-up that favors arterial hypertension in order that it may serve as a guide both to applied eugenics and to prophylaxis. This is not to say that persons other than those with these and other constitutional inferiorities may not sometimes develop chronic arterial hypertension. But I do wish to emphasize the view that certain constitutions are much more prone than others to the early development of high blood pressure. To quote again that revered master of internal medicine to whom all of us owe much: "We must keep ever in mind the kind of tubing that a man starts with." This "tubing," the vasomotor nervous system innervating it, and the organs of chemical regulation in the body that yield chemical substances that impinge upon both, depend largely upon the source from which the person springs, that is, upon the family stock.

#### THE MANAGEMENT OF PATIENTS WITH HIGH BLOOD PRESSURE.

I shall speak of the management of patients with high blood pressure rather than the treatment of high blood pressure, for our therapy is not directed so much toward the high blood pressure itself, which is, doubtless, largely a compensatory process, as toward the conditions that underlie it or toward those that may be associated with it. Our object is to do everything we can to arrest, and as far as possible to compel to recede, the process that leads to arteriolar hyper-tonus and, later, to organic arteriolar sclerosis and its malign sequels. Lacking as we do a sat-

isfactory knowledge of etiology and pathogenesis, our management of these patients at present is of necessity largely empirical. Fortunately, however, experience has shown that physicians can be of very real help to hypertensive patients, cheering and curing them in the earlier stages, arresting or delaying the progress of the underlying malady when it is somewhat more advanced, and palliating the symptoms, comforting the patient and bringing him solace when the later stages have been reached.

*Psychotherapy.*—In all stages of the hypertensive process, psychotherapy in the broad sense of dispelling fear, of inspiring confidence and hope, of educating the patient regarding the nature and course of his malady, of guiding him toward a more hygienic mode of life, and of cultivating in him the ability to face the realities with serenity, will be found to be the most beneficently potent and serviceable agent that we possess.

The best way to inspire the confidence of the patient is to study him thoroughly by modern methods of diagnosis, surveying all domains and convincing him that his physician understands fully his physical condition, his psychical tendencies and his social situation. And the best way to dispel fear and to arouse hope is to explain carefully the patient's exact situation to him after it has been thoroughly investigated and to assure him that he can and will be given definite instructions how to live in the way best suited to cure, to arrest, to delay, or to mitigate, according to the stage of the process in which he is believed to be. He should be told that the exact height of the blood pressure is of far less importance than the conditions that underlie it, and that the treatment is to be directed toward the latter rather than toward the former. And he should be assured that, if he is willing, his physician will give him the supervision that he needs and will see to it that he need leave nothing undone that will be of help to him in the restoration, or preservation, of his health and his capacity for working and living.

*Dietotherapy.*—Much hardship has been imposed upon patients with high blood pressure by the ordering of diets that are more limited and monotonous than is necessary. In the early stages of hypertension there is certainly no advantage in placing the patient upon a rigidly restricted diet. I have known patients with mild hypertension to be kept for weeks upon skimmed milk, or upon vegetables and fruit, or upon some other form of irrationally schematized nourishment! A few days of any one of these rigidly limited diets will probably harm no one, though except in advanced cases with serious cardiac or renal complications I cannot see that they will often be indicated. But to keep any patient in the early or middle stages of the hypertensive process upon such diets for long periods is not only of no benefit, but also, in my opinion, torturing to the patient and harmful to him.



In planning dietary instructions for the patient with high blood pressure one should know (1) his habits of eating, (2) his occupation and mode of life, (3) his calculated ideal weight, and the extent to which his actual weight deviates from this, (4) the circumstances of his life in as far as they bear upon the accessibility of articles of diet and upon their mode of preparation, and (5) the functional capacity of his digestive, his circulatory and his eliminative organs. And then, if the physician will use ordinary common sense in addition to his special medical knowledge, he will be able to plan a diet that will be compatible with the patient's whole condition, agreeable and satisfying to him, and not, impracticable as regards his place of residence, his ménage, or his purse.

The following principles may be of help as a guide in the planning of dietary regime: (1) The patient's preferences regarding food should be given every consideration compatible with innocuity; (2) the diet should contain a sufficient number of calories to maintain the patient at calculated ideal weight and this will depend to some extent upon his occupation and muscular activity; (3) if the patient be obese, the diet should be such as gradually to reduce his weight, and if he be emaciated, it should be liberal enough gradually to increase his weight, though it should be borne in mind that, other things being equal, patients with tendency to high blood pressure seem to do better, as a rule, when a little under calculated ideal weight than when they are above it; (4) the diet should be simple, agreeable, and easily accessible to the patient and it should be eaten at regular hours, in a leisurely way, and in pleasant surroundings; (5) it should be a well-balanced diet, containing the proper proportions of proteins, carbohydrates, fats, vitamins, mineral salts and water; excess of proteins, of purins and extractives, of carbohydrates, and of sodium chloride should be guarded against, and a plentiful supply of vitamins should be ensured by the inclusion in the daily diet of a certain amount of milk (and dairy products), leafy vegetables, and fruit or fruit juices; and (6) the diet should be compatible with the patient's powers of mastication and digestion, with the efficiency of his myocardium, and with his capacity to eliminate the end-products of metabolism, though it is only in the later stages of the malady that the cardiac and renal functions are unequal to a diet suited to a normal person of the same age and occupation.

*Work and Rest; Exercise and Recreation.*—

In the earlier stages of hypertension it is not work, either mental or physical, that is harmful to the patient, but the conditions under which the work is done and the worry, haste, agitation, and excitement that may accompany it. Even in the later stages of the malady, some properly regulated work is desirable, for every physician knows the great harm that is likely to result

from the entire relinquishment of work so often mistakenly advised by the family or the friends of the patient. Even the laity are familiar with the harm to the physique that so often seems to follow upon the sudden cessation in middle or later life of a man's paramount interests and occupations, especially if they have been those of a metropolitan existence. Many of these patients do, however, work too many hours of the day, too many days of the week and too many months of the year. They carry too heavy a load, scorning rest and outdoor exercise, vacations, relaxations, and recreations, failing to realize that they can do more work in five days than in seven, in ten months than in twelve, provided the days and months when they do not work are given over to proper recreation.

And here the physician must intervene and persistently persuade. It may be necessary to interdict the taking on of new and heavy responsibilities; to lead a patient to lighten the burden of work that he is carrying each day; to prescribe definite hours of rest (lying down) and of systematic exercise in the open air (walking, golf, Badminton, bowling, horseback-riding); to encourage gentle calisthenic exercises (say Sanford Bennett's system of exercises in bed each morning); to enjoin on the patient regular longer vacations (in mid-summer, in mid-winter, at Thanksgiving, and at Easter), to be spent in the woods or on the water, in the hills or by the sea, in addition to a half-holiday on Wednesday and the week-end (Friday night to Monday morning), free from work, when it is possible to arrange for them; and, in general, to cultivate in him a spirit of play, a delight in recreation\*, an interest in some hobby, and the enjoyment of the beautiful in nature, in art, and in literature.

A warning may not be out of place regarding the excesses in exercise and in diversion that often result from the injudicious advice of friends or from the initiative of patients themselves who are tempted to spasmodic efforts to improve their condition. Immoderate exercise and intemperate diversion may be very harmful to the hypertensive. Who has not seen the flagging heart-muscle of the hypertensive break down under the strain put upon it by an ignorant "physical trainer," or by an over-enthusiastic golf-companion? And who has not observed the complete collapse of the hypertensive who strives to become free from his cerebral "neurasthenic" symptoms by driving himself to add the fatigue of nocturnal "diversion" to that of excessive diurnal activities, attempting to spur on a brain already languishing under over-stimulation by adding alcoholic, sexual and other stimuli to those of his fretful and feverish business or professional life! In the choice of forms of exercise and of recreation, and in the control of the amount taken, the

\*cf. Viscount Grey's address, "Recreation," published by Houghton, Mifflin & Co., Boston.

physician may prove a most helpful adviser to these high blood pressure patients.

**Hydrotherapy.**—In the early stages of arterial hypertension, the patient's bathing habits may, without harm, be the same as those of an entirely healthy person, but when the hypertension has become outspoken and especially in the later stages when serious complications threaten, only warm or tepid baths (tub or shower) should be permitted. Even these should be carefully supervised, for a warm bath, though it increases the systolic pressure but slightly, is often followed by a drop of 25 to 30 mm. in diastolic pressure with corresponding increase in the "heart load." Swimming and surf bathing, permissible early, are best interdicted later because of the prolonged chilling of the skin and the dangers of over-exertion. Patients undergoing spa treatment should be protected from all violent forms of hydrotherapy and mechanotherapy, though an annual visit to a spa where the treatment is simple, restful, and well-organized may be of real advantage to the hypertensive patient.

**Massage.**—This is superfluous in the early stages of hypertension, though in the more advanced stages it may be employed with advantage during the occasional periods of rest that these patients find very helpful.

**Electrotherapy.**—The only form of electrotherapy that seems to exert any other than a psychotherapeutic effect in high blood pressure cases is the application of high frequency currents (d'Arsonovalization). Though I have made no use of this measure myself, some of my patients have told me that their subjective symptoms were considerably lessened by a series of exposures to high frequency currents, and physicians who employ them report that at least temporary decreases of the blood pressure can be counted upon as a result of their application.

**Climatotherapy.**—Relatively few patients are in a position to choose the climate in which they are to live, but are compelled to remain in that climate in which the other circumstances of their lives have placed them. And, fortunately, for the majority of patients with hypertension, climate is a relatively indifferent matter to them, provided they take care to dress according to the seasons, to avoid chilling of the skin and undue exposure to inclement weather. In the later stages of hypertension, it is undoubtedly advantageous for the patient that suffers from it to live in a dry and equable climate so that he can without danger spend much of the time comfortably in the open air. Thus, in this country, many of our advanced hypertensives whose means permit of it winter in Florida, Georgia or California, and summer in one of the cooler (but not cold) districts in the North; they form one group of "the migratory rich," seeking at each season of the year the climate and the locality that is most suitable to their condition. But such migration is neither possible, nor advisable, for the major-

ity, and it is especially wrong, in my opinion, to urge patients to undertake such migration when it entails financial hardship, social uncongeniality, or premature retirement from regular occupation. In this connection, too, it is well to bear in mind the epigram of Martial, "a man who lives everywhere, lives nowhere."

**Pharmacotherapy.**—Drugs have their place in the treatment of chronic arterial hypertension, but it is a less important place than was formerly supposed.

If there be constipation, it should be overcome, mainly by diet, exercise, and habit formation, but *mineral oil* and *gentle laxatives* at night, or morning *salines*, may sometimes be required as adjuvants. Many hypertensives feel better for a weekly or a fortnightly purge (blue mass and compound extract of colocynth at night, followed by a saline the next morning).

The *iodides* were formerly given almost as a routine measure to patients with high blood pressure. Now that we know that the underlying process is not due to syphilis, the iodide treatment has gone out of fashion. Some patients with hypertension undoubtedly feel better when they take iodides. Why, we do not know, though it has been suggested that a decrease in the viscosity of the blood is responsible. Hypertensive patients that also have hyperthyroidism usually feel worse when they take iodides. The severe headaches from which some hypertensives suffer, are, as a rule, aggravated by the exhibition of iodides.

The *nitrites*, too, are used much less than formerly in hypertension. Nitroglycerine, and sodium nitrite, will reduce the blood pressure temporarily, but without advantage to the patient except in cases of angina pectoris, or in those in which cerebral apoplexy is threatened.

There are many reports in the literature of blood pressure reduction from the use of *radium* emanation or of intravenous injection of soluble radium salt. Further studies must be awaited before judgment may safely be passed upon this form of treatment.

One drug is worthy of much more extensive and more intelligent use in hypertensive cases than is common. I refer to *digitalis*. Not only is it of great value when the heart muscle has evidently begun to flag, but it may be given in moderate dosage earlier with advantage. The circulation improves, renal elimination is favored, and the blood pressure, both maximal and minimal, may sometimes show a lower range. In a case in which the blood pressure has fallen from enfeeblement of the myocardium, with or without "mitralization" of the heart, *digitalis* may restore the blood pressure to its previous high level with both subjective and objective improvement of the patient.

**Surgical Therapy.**—Certainly in the early stages of arterial hypertension, it is desirable to remove all definite foci of infection that are



discoverable in patients in the hope that, by cutting off chronic bacterial intoxication, something may be done toward arresting the progress of the underlying process. Thus definitely infected tonsils, paranasal sinuses, or teeth, chronic cholecystitis, chronic appendicitis, chronic prostatitis, and other local infections, should receive due surgical attention if they be found to exist.

In the later stages of the disease, however, when extensive damage to the kidneys, to the heart or to the blood vessels has already been done, care should be taken not to subject the patient to unnecessary surgical risk, and much judgment is needed to discriminate between the cases in which benefit may reasonably be expected to follow surgical interference and those in which its dangers outweigh the prospective benefits.

Undoubtedly it may sometimes become necessary to operate upon a patient with advanced cardiovascular-renal lesions, for example, in strangulated hernia, in prostatic obstruction, in empyema, or in severe chronic infection of the biliary tract. I have been surprised to find how well, in such cases of surgical urgency, patients with high blood pressure and its congeners bear anaesthesia and surgical trauma, especially if it be possible to prepare the patient during a short period before the operation by rest, by diet and by appropriate measures for strengthening the myocardium and for detoxicating the body by increasing elimination through the kidneys and the bowel.

One minor surgical procedure is worthy of especial mention for the treatment of hypertensive patients, namely, the withdrawal of from 300 to 500 cc. of blood from a vein. The *blood-letting* of our ancestors certainly has its place in the treatment of patients with high blood pressure; most of the advanced cases, especially the plethoric and the obese, are the better for the loss (by needle) of half a liter of venous blood at intervals. Nature, herself, sometimes applies this method for us in the form of an occasional spontaneous and profuse epistaxis.

I am often asked whether or not the operation of splitting the capsules of the kidneys (Edebohl's operation) is advisable in the contraction of the kidneys associated with chronic arterial hypertension. In my experience it has been of no benefit in this form of chronic renal disease.

*Treatment of the Complications that May Occur in the End-Stages of the Process.*—Any full account of the therapy of the various complications that threaten life as the end of this high blood pressure process is approached would of itself require a long paper. In briefest summary, however, I may remind you of the principal measures that may be used.

Thus: (1) In complicating *myocardial insufficiency*, physical and mental rest, a few days of Karrell diet, followed by "cardiac diet," consisting of five small meals a day rather than three large ones, massage, morning saline and evening

sedative, and the use of digitalis or strophanthin.

(2) In complicating *angina pectoris*, avoidance of the things that bring on the pain, careful regulation of the diet and of the emunctories, prohibition of the use of tobacco, and systematic administration of nitroglycerin or of other nitrites both in and between attacks.

(3) In complicating *pulmonary oedema*, hypodermic injections of morphin and atropin.

(4) In complicating "*cardiac asthma*," morphin, nitrites, and digitalis.

(5) In complicating *cerebral apoplexy*, derivatives, ice cap to the head, and rest.

(6) In complicating *uremia*, (a) protection of the kidney (by diet and vicarious elimination by means of mild purgation, diaphoresis and blood letting, (b) support of the heart (by rest and cardiogenic measures); (c) symptomatic treatment of the nervous, digestive and cutaneous manifestations; and

(7) In complicating infections, immediate rest in bed, good nursing, protection of the kidneys, support of the heart, and, in addition, special measures directed toward the local or general treatment of the infection itself.

In these end-stages, the physician can do much to ward off an impending danger, to mitigate suffering, and to solace patient and friends. But both physician and patient do best at the very end of the hypertensive process to face reality with courage, to avoid doing too much, and, especially, to prevent undisciplined, autistic, wishful thinking from inaugurating a busy and meddlesome therapy that not only does the patient no good, but brings torture to him in those last hours that might reasonably be made euthanasic. Were a philosophical hypertensive at the end of his course as cognizant of his real condition as his physician should be, he would say, as did the poet Ovid when, in exile, spirit-crushed and heart broken, he wrote his *omnia perdidimus*,—

"For me all things are lost: even life itself remains

To huddle ill on ill and make me feel their pains.

Already I am dying; why stab me o'er and o'er?  
My wounds are now so many no place is left for more."

#### CONCLUSIONS.

1. High blood pressure appears to depend chiefly upon a narrowing of the lumina of the arterioles in the precapillary areas.

2. The arteriolar narrowing is at first functional, due to hypertonus of the arteriolar musculature, though later it is also partly organic, due to arteriolar sclerosis.

3. The actual causes of the persistent arteriolar hypertonus and of the organic arteriolar sclerosis are as yet unknown, though many ingenious hypotheses have been invented in explanation. The relations to chronic renal disease, to atherosclerosis in general, to exogenous and endogenous

poisons, to infectious processes, to the "wear and tear" of life, to abnormal metabolic states, to endocrine disorders, and to certain types of constitutional make-up have been much discussed.

4. The different types of chronic arterial hypertension would seem to be closely related to one another, probably representing different stages in the development of one and the same fundamental process, a process that may, however, advance with variable rapidity and with variable associated involvements of cardiovascular, renal, cerebral and other structures in different cases.

5. When recognized early, the process may often be wholly arrested; or it may be so delayed in its progress that the patients may live comfortably for years, sometimes even for decades, before troublesome symptoms or dangerous complications occur.

6. In the late stages of the process much can be done to ameliorate symptoms and to ward off dangers, though in the actual end-stages both patients and physicians do better bravely to face reality, accepting the inevitable, rather than through wishful thinking to increase suffering by

resort to a meddlesome therapy that attempts the impossible. While men breathe, they hope; but "hope is a curial dog in some affairs."

7. To prevent the development of the pathological process underlying high blood pressure, one should first "get himself well born," without "constitutional inferiorities," and then should avoid intoxications and infections, and lead a life without too much wear and tear. He should satisfy his physical, economic, social, educational, aesthetic and ethical desires in a well-balanced way, so ordering his activities that he will secure the highest self-realization possible in the service of the society in which he lives.

The cultivation of the sense of proportion in the conduct of life, so well expressed in the classical phrases *meden agan—nil nimis*—"avoid extremes," will go far toward preventing the onset of a malady that, all too prone to develop in modern civilization, cuts short in the early afternoon lives that, rationally led, might experience work and joy until the evening.

1035 NORTH CALVERT ST.

## Peripheral Nerve Injuries: A Clinical Analysis\*

Lewis J. Pollock, M.D., Chicago

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**Editor's Note.**—The striking feature of the clinical picture of early nerve lesions is the large percentage of marked and rapid improvements. There were probably 10,000 peripheral nerve lesions sustained in battle by the American Expeditionary Forces. To Dr. Pollock's knowledge not more than 3,000 cases were classified as peripheral nerve lesions in the hospitals of the United States. In other words, two-thirds of the cases of peripheral nerve lesions had sufficiently recovered, on reaching home hospitals, that their lesions were considered as of minor importance. From the cases coming under his personal observation, Dr. Pollock concludes that if the conservative attitude adopted in the handling of nerve lesions at U. S. A. General Hospital No. 28, Fort Sheridan, Illinois, resulted in so great a number of recoveries, then no more than one-seventh of all cases should come to operation.

**I**N THE casualties of the late war, injuries to the peripheral nerves comprised a formidable group. At one time 363 cases of injury to the peripheral nerves were found in a personal bed to bed canvass of 5,050 patients in Base Hospitals in France. Of these 2,130 had wounds in their extremities.

### STATISTICAL DATA

In my experience peripheral nerve lesions occur in from 4.5 to 5 per cent. of the total casualties and in 15 to 16 per cent. of the cases wounded in their extremities.

Statistics relating to the incidence of peripheral nerve lesions have only a relative value, depending as they do upon the intensity with which a search for such lesions had been made in the various hospital centers.

For this reason and because statistical studies

usually indicate a dry tap of information, but little will be said of such data. Suffice it to say that of 1,020 cases of injuries of the peripheral nerves, 982 accessible records showed the most frequent injuries to have occurred in the following nerves in the order in which they are named: Musculospiral, including lesions of the posterior interosseus (165); sciatic (160); ulnar (136); external popliteal (120); median (93); brachial plexus (71), and combined ulnar and media (58.)

### STANDARDIZED METHODS OF EXAMINATION AND ESTABLISHED VALUES OF INJURY

To profitably study the signs of peripheral nerve injury and degeneration, it is necessary to have standard methods of examination, and a proper sense of recognized and established values.

The most evident consequence of an injury to a mixed nerve is *paralysis*. If it were possible to isolate each muscle and observe its action upon volition, the examination of the motor function

\*An address delivered before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.



would be simple. Unfortunately, this is not the case and we are compelled to observe the action of such muscles through the movements of segments about a joint, which they inaugurate.

The frequency with which more than one muscle may produce a similar movement of the segments about a joint emphasizes the necessity for the use of great care in the analysis of all muscle movements. This care is the more necessary because the muscles under consideration may receive their nerve supply from different sources. The preservation of certain movements, whose loss is supposed to follow particular nerve lesions, has been observed for many years. These movements may be caused by a number of factors. Among these may be included the anastomotic supply of muscles from adjacent nerves, movements produced by muscles other than primary movers in this action, movements occurring as the result of mechanical factors producing a change of direction of leverage, by shortening and lengthening the tendons and muscles passing over several joints, and slight movements resulting from the recoil of elastic tissue following a movement in a direction opposite to the one desired.

*It is to the misinterpretation of such movements that miraculously rapid recoveries following resection and suture of peripheral nerves by some surgeons must be attributed.*

#### LOSS AND RETURN OF SENSATION

For many years it has been noted that total loss of sensation after complete division of a peripheral nerve is limited to a much smaller area than we would expect from its anatomic distribution. Likewise, it has been observed that following injury to a peripheral nerve, sensory symptoms may rapidly diminish and at times loss of sensation to pin prick be entirely absent. That severe, widespread anesthesia results only from trauma of several nerve trunks of a plexus, had been generally accepted. Lesions of single nerves result in partial anesthesia, or if a severe anesthesia be present the area of complete loss of sensation rapidly shrinks.

It is essential to determine the cause of this relatively early return of sensation. We must define that return of sensation which is due to the regeneration of a nerve and that which is due to the assumption of function of adjacent and overlapping nerves. It has been contended by Head that protopathic fibers regenerate with unusual and rapid facility and that the length of the nerve to be regenerated makes relatively little difference to the time at which protopathic sensibility returns. This is not in conformity with any known physiological law.

I maintain that the return of sensibility to prick pain, which occurs before the return of sensibility to touch, is due to the assumption of that function by adjacent nerves.

I am supported in my contention by the fol-

lowing facts: *First*, I have never found a return of sensibility to pain, when sensibility to touch had not returned, except in an area of overlap. This area may be determined by noting the residual sensation of a nerve. For example, if we wish to determine the residual sensibility of the radial nerve, we sever all the adjacent nerves, ulnar, median and musculocutaneous; the area of skin in which sensation is preserved is the total sensory supply of the radial. That portion of skin which extends beyond the recognized anatomical distribution of the radial nerve is the area of the overlap of the radial nerve to the adjacent nerves. *Second*, when a nerve is divided and at the same time one or more adjacent nerves are divided, sensation to pin-prick does not return in the area of overlap of these divided adjacent nerves, many months following the injury. *Third*, when a nerve adjacent to one which is severed, and which supplies an area of overlap to that nerve, is sectioned, the pre-existing sensibility to pin-prick in the overlap area is lost. *Finally*, when sensibility to pin-prick is present within the anatomic sensory distribution of a severed nerve, resection and suture has no effect on a general outline of this area of sensibility.

It is to the misinterpretation of this early return of prick-pain, that many early "recoveries" following nerve suture, have been attributed. It is necessary, if one uses ordinary clinical methods of examinations, that is, a pin for determining presence of pain sense, to know the area in which the return of prick-pain should not be employed as an indication of nerve regeneration. If low degrees of pressure be employed; that is, ten grams, it will be found that the area of analgesia closely follows the loss of touch sense.

#### INCONSTANT RESULTS IN THE STUDY OF ATROPHY

It has been generally accepted that the degree of atrophy is commensurate with the severity of the lesion of a peripheral nerve. When the amount of atrophy is ascertained by such means as the measurement of the displacement of water by the affected extremity, as compared to the unaffected one, some astonishing results are obtained.

Comparing the atrophy in the muscles of the upper extremity distal to the elbow in injuries of the nerves in the upper extremity and atrophy below the knee in injuries of the lower extremity, we find that the loss of substance varies to such an extent in both recovered and complete and irreparable lesions, that no conclusions can be made.

Some recovering sciatic lesions may have a loss of substance amounting to 17 per cent. of the total mass of the leg, and a complete sciatic lesion may show but one per cent. A recovered external popliteal may show 16 per cent. loss

and a complete lesion show but one per cent. Inversely, a recovered sciatic lesion may show but four per cent. and a complete lesion 24 per cent.

In general it may be said that the greatest atrophy occurred in complete lesions, but inasmuch as this is inconstant and little or no atrophy may be present, this phenomenon is of little value in determining the severity of the lesion.

Some of the discrepancy is probably due to the replacement of muscle fibers by other tissue, but it is my opinion that much of the absence of atrophy is due to the exercise of the paralyzed muscles, whether obtained by massage, electricity, or passive movements of the extremity by means of the unparalyzed muscles.

Of all lesions, the radial nerves showed the least atrophy.

#### QUESTIONABLE VALUE OF TINEL'S SIGN

I will mention Tinel's sign to which so much importance has been ascribed by some men, only to condemn it as a positive clinical sign. This sign consists of the appearance of a formication or tingling in the peripheral distribution of a nerve when pressure or light tapping is applied to the nerve distal to the injury. The distance from the point of injury at which this sensation may be elicited determines the progress of regeneration and the degree of recovery. If the sign be elicited by pressure, then some value may be attached to it. If it is elicited by tapping, no value should be attached to it, as concentric waves are transmitted from the area tapped, which may stimulate the nerve at a considerable distance from this point. In any event, I have found the sign to be absent in many recovering cases and apparently present in many cases irreparable and with complete anatomical section.

Tone may be measured by ascertaining the amount of pressure expressed in millimeters of mercury, necessary to insert a blunt plunger a certain distance into a muscle mass. It was found that only for a short time after a peripheral nerve lesion was incurred, was this method practicable. After fibrosis occurred, the resistance to pressure resulted from factors other than tone, and the method was of little use. In the former instance, the difference between normal and paralyzed muscles would be expressed as between 160 to 180 mm. of mercury and 40 mm. of mercury.

#### FACTORS IN PROGNOSIS AND TREATMENT

The prognosis and treatment of peripheral nerve lesions is dependent upon our ability to differentiate partial and recovering from complete and irrecoverable ones. A few generalizations are permissible. There is no method whereby a complete physiological interruption can be differentiated from an anatomical one. In other words, as complete total loss of function in all

modalities may follow a compression as a section. Usually the lesions observed soon after injury show a recovering condition by incomplete motor or sensory loss and early increase in motion or assumption of sensory function. Some months after injury it is only the relatively severe cases which come under observation, and in them a complete physiological interruption may be present without change for a number of months, in my experience up to nine, and the lesion be one which may spontaneously recover.

#### DETERMINING INDIVIDUAL NERVE LESIONS

To determine what nerve has been injured is relatively a simple matter. Loss of function of each nerve is marked by a few very distinctive



Figures 1-2. (1) Musculospiral lesion. (2) Extension of wrist by supplementary movement in a complete section of the musculospiral nerve.

and easily remembered signs. In each a special supplementary motility develops and a more or less constant area of early return of sensation to prick-pain, due to nerve overlap, appears.

#### MUSCULOSPIRAL LESION

Following a division of the *musculospiral* nerve there is lost extension of the first phalanges of the fingers, extension of the wrist and of the thumb, adduction and abduction of the hand, and if the lesion is high, supination of the forearm when extended and, rarely, extension of the forearm.

Three pathognomonic signs of musculospiral injury are: *First*, wrist-drop; *second*, inability to extend the proximal phalanges of the fingers and, *third*, inability to extend the thumb. (Fig. 1.)

Of the supplementary movements developed in musculospiral paralysis a few of the more prominent ones will be mentioned. Dorsal flexion of the hand may be produced by energetic contraction of the flexors of the fingers. In other words,



upon attempting to close the hand it is extended at the wrist. In some cases strong contraction of the pronator radii teres will produce extension of the hand upon the forearm. During this movement the head of the radius is strongly depressed towards the palm and the hand deviates to the ulnar side. The extension of the wrist is probably due to two factors: *First*, the lengthening of the extensor tendons and muscles, *second*, to a leverage exerted upon the trapezoid by the head of the radius. At times, in addition to the contraction of the pronator, there is seen strong adduction and opposition of the thumb against the proximal phalanx of the index finger. At the same time, resistance is made to this action by the contraction of the lumbricale muscle and the hand is extended upon the forearm to a noticeable degree. Although never as complete or as strong as when the extensor pollicis is intact, the flexor brevis pollicis may produce extension of the distal phalanx of the thumb in musculospiral palsy. (Fig. 2.)

Inasmuch as the radial nerve may have no isolated supply of prick-pain, any return of such pain in the area subserved by the radial nerve cannot be interpreted as a sign of nerve regeneration. In other words, the median, ulnar musculospiral completely overlap the supply of the radial.

Ability to place the little finger to the seam of the trousers with the fingers extended and the palm to the front is evidence of complete motor recovery.

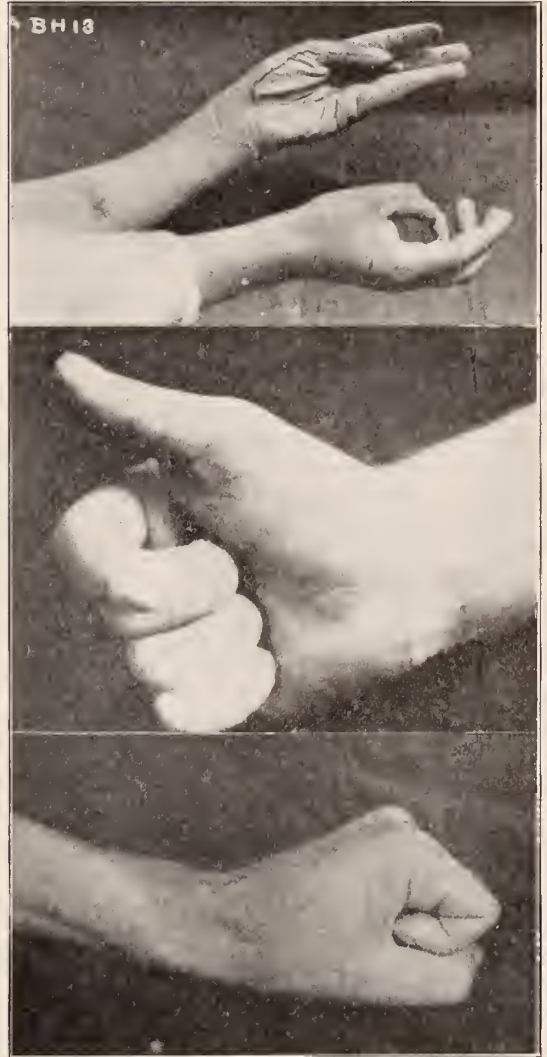
#### MEDIAN NERVE LESION

In division of the median nerve it is supposed that the patient is unable to pronate the forearm, to tense the palm, to contract the flexor carpi radialis, to flex the second phalanges of any finger, to flex the distal or third phalanges of the index and middle fingers, to flex the proximal phalanges of the index and middle fingers, to flex the second phalanx of the thumb, to oppose or abduct the thumb, and finally, fully flex the proximal phalanx of the thumb. (Fig. 3.)

Three pathognomonic signs of paralysis of the median nerve are: *First*, inability to oppose the tip of the thumb to the tip of the little finger; *second*, to fully flex the index finger; and, *third*, to flex the distal phalanx of the thumb as in clenching a fist. (Fig. 4.)

Contrary to expectations, section of the median nerve is frequently followed by but little disturbance. Flexion of the proximal phalanges of the inner two fingers is preserved because the lumbricales of these two fingers are supplied by the ulnar nerve. At times the middle finger may likewise receive its supply from the ulnar. Flexion of the proximal phalanges of the middle and index fingers may result from strong contraction of the flexor profundus digitorum, the lumbricales originating in its tendon, and from extension of the distal phalanges by means of the

interossei. Flexion of the second phalanges of the inner two fingers occurs as the result of an accompaniment of this movement to the normal flexion of the proximal and distal phalanges. This may also be true of the middle finger. Opposition of the thumb may be simulated by the action of the adductor pollicis and the inner head



Figures 3-4-5. (3) Median nerve palsy. Inability to oppose the thumb to the little finger. (4) Inability to flex finger and thumb in median nerve palsy. (5) Complete recovery of median nerve.

of the flexor brevis pollicis with the terminal phalanges of the little finger flexed. Slight flexion of the distal phalanx of the thumb may result as a rebound phenomenon following strong extension.

Return of sensation to prick-pain in any part of the median supply, except the palmar and dorsal surfaces of the two distal phalanges of the index and middle fingers, cannot be interpreted as a sign of regeneration, but must be attributed to the overlap of the radial and musculocutaneous nerves.

In interpreting motor signs of regeneration,

the widespread supplementary movements following an injury to the median nerve, must be recognized. The pronator radii teres, the palmaris longus and flexor carpi radialis were the muscles to recover first following secondary suture.

Complete flexion of the index finger as brought out by making a fist or claspings the hands together is a good sign of motor recovery of the median nerve. (Fig. 5.)

#### ULNAR NERVE LESION

It is supposed that section of the ulnar nerve produces inability to flex the proximal or distal phalanges of the ring and little fingers, to abduct or adduct the fingers, to extend the second and distal phalanges of any of the fingers, to adduct the thumb, to contract the flexor carpi ulnaris and abduct or oppose the little finger.

Three pathognomonic signs of ulnar palsy are, besides the atrophy of the first dorsal interosseus, with clawing of the two inner fingers, *first*, inability to firmly grasp flat objects between the thumb and forefinger (paralysis of the adductor pollicis); *second*, inability to flex the proximal phalanges with the distal ones extended, (lumbricales palsy) and, *third*, inability to abduct or adduct the little finger.

Slight flexion of the proximal phalanx of the ring finger may be obtained from the contraction of the flexor profundus digitorum pulling upon its lumbricale muscle. Extension of the second and third phalanges of all the fingers is partly preserved for the following reasons: innervation of the first and second dorsal interossei by the median; passive extension of the second and third phalanges by flexion of the proximal ones, thereby shortening the interossei, and, the influence of the contraction of the extensor communis digitorum.

In adduction of the thumb the extensor longus pollicis is a prime mover and in ulnar nerve lesions it may supplant the loss of the adductor pollicis.

Abduction of the fingers away from the midline may result from forced extension of the first phalanges. Abduction of the index finger may be produced by strong abduction and extension of the thumb. When the hand is abducted to the ulnar side, contraction of the extensor indicis produces slight adduction of the index finger.

Return of prick-pain only over the palmar or dorsal surface of the little finger can be interpreted as a sign of nerve regeneration.

With the possible exception of lateral movements of the little fingers, all other movements commonly understood as lost, following section of the ulnar nerve, may be imitated by supplementary motility. As a result I have found it impossible to state when any such movement could be interpreted as a sign of regeneration. Such movements may increase in strength from

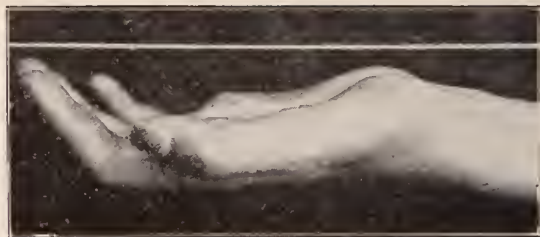


Figure 6. Ulnar and median nerve palsy.

supplementary motility alone. In this instance, therefore, definite signs of sensory regeneration furnish the best proof of the regeneration of the nerve.

A good sign of complete recovery of the ulnar nerve is the ability to fully flex the little finger beneath the palm with the hand laid flat upon a table, after having moved the middle finger from side to side.

In combined lesions of the ulnar and median nerves all flexor movements are lost and the thenar and hypothenar muscles paralyzed. Typical of this condition is the ape-hand with the thumb in the same plane as the fingers. (Fig. 6.)

It must not be forgotten that the extensor ossis metacarpi pollicis can flex the wrist, at times to a marked degree in such combined palsies.

Return of sensation to prick-pain in the radial part of the palm cannot be used as a sign of nerve regeneration.

#### BRACHIAL PLEXUS LESIONS

Direct lesions of the brachial plexus due to war wounds present no clearly defined classifications. Ordinarily, immediately following the injury, there is a complete paralysis of the brachial plexus which, as the effects of the concussion disappear, resolves itself into one or another type of involvement of one or more cords, or an incomplete type of total brachial plexus paralysis.

Lesions of the inner cord of the brachial plexus are evidenced by paralysis of all the intrinsic muscles of the hand and some, or all of the flexors of the wrist and fingers. Lesions of the posterior cord are evidenced by paralysis of the muscles supplied by the circumflex, musculospiral and subscapular nerves. Lesions of the outer cord result in paralysis of the muscles supplied by the musculocutaneous and median nerves with the exception of the intrinsic muscles of the hand.

One of the interesting things observed in lesions of the brachial plexus has been the coincidence of lesions of the spinal cord with these injuries. This combination usually consists of a unilateral cord lesion on the side of the injury, giving a picture of a Brown Sequard paralysis, which gradually disappears, leaving a slowly recovering brachial palsy.

It is of great clinical importance to note that



brachial plexus lesions as a whole tend to recover spontaneously.

#### EXTERNAL POPLITEAL NERVE LESIONS

Paralysis of the external popliteal nerve is characterized by foot-drop, loss of ability to dorsally extend the toes, including the great toe, and to evert the foot.

The isolated supply to prick-pain of the external popliteal nerve is a narrow band extending from a point a little above the function of the lower and middle one-third of the outer surface of the leg diagonally across the dorsum of the foot to a point over the middle of the metatarsal bone of the great toe, and is interrupted by an algesic area at the junction of its lower and middle thirds. The return of prick-pain in areas outside this distribution cannot be interpreted as a sign of nerve regeneration.



Figure 7. Sciatic nerve palsy.

loss of all movements below the knee. It is notable that the hamstring muscles are always invariably spared. (Fig. 7.)

#### RESULT

The striking feature of the clinical picture of early nerve lesions was the large percentage of marked and rapid improvements. An analysis of the first hundred cases seen in Base Hospital No. 13, showed that after three months sixty-one had been discharged. Twenty of these cases had sufficiently recovered to be sent to convalescent and replacement camps. Thirty-nine cases remained in the hospital. Twenty of these were manifestly only partial lesions, and only five were so severe as definitely to indicate the necessity for surgical interference.

There were probably 10,000 peripheral nerve lesions sustained in battle by the American Expeditionary Forces. To my knowledge not more

than 3,000 cases have been classified as peripheral nerve lesions in the hospitals of the United States. In other words, two-thirds of the cases of peripheral nerve lesions had sufficiently recovered so that this lesion was of minor importance.

From 488 available records of 520 cases of peripheral nerve lesions seen in U. S. A. General Hospital No. 28, Fort Sheridan, Illinois, 301 had either recovered or were recovering.

From the cases coming under my personal observation it would seem that about one-seventh of the total number of peripheral nerve lesions incurred in battle come to operation. In some clinics the number operated upon is very much greater, but if our conservative attitude results in as great a number of recoveries, then no more than one-seventh of all the cases should come to operation.

25 EAST WASHINGTON STREET.

#### Propaganda for Reform

*Internal and External Antisepsis.*—Despite the numerous efforts to demonstrate the efficacy of this or that chemical agent or drug as a gastrointestinal antiseptic, the outcome has been that the supposed benefits were due to catharsis in most instances rather than to any real effect upon the bacteria in situ. Similarly, J. F. Norton, in an investigation made for the Council on Pharmacy and Chemistry, has shown that the value of "antiseptical and "germicide" soap depends on the soap and not on the antiseptic or germicide contained in them. In fact, ordinary toilet soap and the green soap used by surgeons was more efficient, evidently because the added antiseptics and germicides interfered with the lathering qualities of the soap (*Jour. A. M. A.*, Aug. 14, 1920, p. 478).

*The Bethlehem Laboratories, Inc., Preferred Stock*—Physicians in various parts of the country have received advice that they have been selected to share in the profits of the Bethlehem Laboratories Inc., New York City. The company claims to control the manufacture of hyclorite, a product accepted by the Council on Pharmacy and Chemistry. These physicians are given an option to purchase four shares of the company's stock for four hundred dollars. The directorate of the Bethlehem Laboratories, Inc., is stated to be composed of business men of Bethlehem, Pa., the president of the General Laboratories, Madison, Wis., a "prominent physician" of Bethlehem, and J. Jay Reilly, Philadelphia, a "prominent Philadelphia surgeon and consulting chemist to several large manufacturing drug concerns." Hyclorite, manufactured by the General Laboratories, Madison, Wis., was accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies because at the time that it was considered, it was marketed in accordance with the Council's rules. The investment proposition which the Bethlehem Laboratories makes to physicians is an insult to decent medical men. When physicians are interested in products they prescribe or recommend, the public does not get a square deal. It is against public interest and a degradation of scientific medicine for physicians to be financially interested in the products they prescribe. (*Jour. A. M. A.*, Aug. 14, 1920, p. 493).

# Vestibular Vertigo. Prognosis in Different Types of Cases and Brief Reports of Cases\*

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**Editor's Note.**—Otologists are not necessarily charged with the responsibility of analyzing the various extra-aural lesions or disorders of which vestibular vertigo may be an expression, but Dr. Kerrison maintains that they should be able to determine whether, and in what portion and to what extent the labyrinth is involved. Constant or semi-constant vertigo, as a result of a functionally dead labyrinth is practically a clinical impossibility. Coincidence of a functionally inactive labyrinth and prolonged or persistent vertigo, according to Dr. Kerrison, therefore suggests either that the labyrinthine lesion is either potentially active and progressive or the vertigo is intercurrent and to be otherwise accounted for. In vertigo of purely vestibular type relief occurs by restoration of normal nerve tone and function or by absolute nerve paralysis or destruction. The vestibular nerves, comparatively invulnerable by injuries from without, seem rather susceptible to toxic agents reaching the ears by the blood or lymph streams. Vertigo depending upon a vestibular neuritis of recent development, if the cochlear mechanism escapes injury, recovers quickly when the cause is removed. In vertigo depending upon a chronic, non-suppurative lesion involving the static and auditory mechanisms alike, prognosis is exceedingly uncertain and the probability of the current attacks from slight causes is very considerable. Cases of vertigo beginning with a sudden onset of severe and characteristic vestibular type give, as a rule, a distinctly more favorable prognosis than do the more indefinite types of gradual development. Vertigo of non-vestibular type, even in the presence of a demonstrable vestibular lesion, constitutes a very questionable basis for either a prognosis or a plan of treatment.

I AM not without misgivings in bringing before you so difficult and dry a subject as vertigo, particularly as I have no brilliant method of treatment to outline. My purpose is to consider briefly the otologic aspects of certain types of cases for which, possibly, many of us have been disinclined to assume our full share of responsibility. Taking the general run of cases referred to us, it is of course a debatable question; which of them do, and which do not, fall within the province of otology. Do we in all cases discharge our full obligation to the patient and to the physician by whom he is referred, when we are able to state the symptoms are not due to a lesion originating in the ear? In other words, may the otologist feel himself unconcerned with cases of vertigo not etiologically traceable to an aural lesion?

## SCOPE OF AURAL VERTIGO

*Probably most of us, if asked offhand to define aural vertigo, would say that it applies to a disturbance of equilibrium caused by a lesion originating in the ear. It is obvious, however, that this definition no longer meets the everyday needs of practical otology. Clearly the term must be made to include any disturbance of equilibrium, the pathologic sequence of which includes a disturbed vestibular balance. Having determined a vestibular pathway and excluded a primary lesion in the ear itself, the search for an extra-aural focus of disease may lead to a gastro-intestinal infection, a diseased tonsil, an infected dental root, an abscess in the most distant part of the body, cerebro-spinal syphilis, a nephritis, or any dyscrasia causing chemical changes in the blood. Any of these lesions, when they give rise*

*to a disturbance of balance between the two static labyrinths, induce a vertigo of vestibular type.*

If we recall the severer cases of vertigo as we saw them at our first examination, we shall probably agree that not infrequently the most immediate and urgent need, so far as the patient is concerned, is a well considered and definite statement upon which he may base his expectation or hope of an ultimate recovery. Such a statement, I am inclined to believe, the otologist, even oftener than the neurologist, is or should be in a position to give.

I shall not waste your time in theoretic discussions of pathologic conditions, the exact nature of which we do not actually know, but shall give briefly a very few case reports—cases probably by no means clinically unusual—with such tentative deductions, or conclusions, as the facts may seem to warrant.

The nine cases of which I shall submit brief reports present interesting etiological contrasts. Two are purely otitic; two others are as surely of extra-aural origin; a fifth is intra-cranial; two are probably of mixed origin. The remaining two, the cause and pathology of which are admittedly unknown to me, are reported on account of certain interesting clinical contrasts which they present. Of the nine cases, the vertigo has been relieved in eight.

## CASE REPORTS

**CASE I.** Miss A. M., aged 36, a woman of education but dependent on her own efforts for a support, came under my observation at the Manhattan Eye and Ear Hospital on November 17th, 1919. She had been working possibly beyond her strength. She gave the following history: Five weeks previously, without any preliminary symptoms, she was suddenly seized with nausea and vomiting and the most extreme grade of rotary

\*An address delivered before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.



vertigo. The room seemed to whirl about her in bewildering fashion. She was lifted from the floor where she had fallen and put to bed. The vomiting continued though with lessening frequency for several days, and not until the eighth day had the vertigo subsided sufficiently for her to get up and be about. Since the attack, which at the time was regarded as a gastric disorder, she had been unable to do any work because of the frequent sense of dizziness. She was in great obvious anxiety lest she should be permanently incapacitated for work and lived in continual dread of a recurrent attack in acute form.

*Examination.*—With the eyes closed, the patient walks unsteadily but is able to maintain a fairly straight course. She sways slightly in Romberg position, but shows no definite falling direction. Both drum membranes are normal and hearing is absolutely normal in both ears.

*Rotation Test.*—Rotation ten times in 20 seconds in opposite direction gives following results: after nystagmus to right, 11 second; after nystagmus to left, 22 seconds.

*Caloric Test.*—Irrigation of right ear with cold water (70°F.), continued two minutes gave no nystagmus, and resulted in absolutely no subjective disturbance. Irrigation of left ear was followed in 40 seconds by strong typical nystagmus to right and the usual subjective vertigo and ataxia.

These tests, showing loss of excitability in the right vestibular mechanism, were repeated one week later and gave precisely the same results.

It was evident that we had in this case an instance of a toxic agent of some sort which had selected as its sole object of attack the right vestibular nerve. The initial attack was probably due not to irritation of this nerve, but to sudden and complete ablation of its function.

On the theory of a possible syphilitic involvement of the nerve, a Wassermann test was made, with a negative result.

The patient was kept under observation and on December 14th the rotation and caloric tests were repeated with the following results: the duration of the nystagmus following rotation in opposite direction was now the same (21 seconds). Irrigation of right ear with cold water continued 2 minutes and 15 seconds resulted only in very slight and indefinite eye movements, and these were accompanied by absolutely no vertigo or discomfort.

*Rightly or wrongly, the hypothesis tentatively assumed in this case was of some form of ptomaine poison in which the right vestibular nerve bore the brunt of the attack. Somewhat supporting this hypothesis was the fact, subsequently elicited, that on the day before her primary attack she had lunched in a second-rate restaurant and that the food had seemed of questionable quality.*

Rest as far as possible, a reasonably careful diet and regulation of the bowels constituted the line of treatment advised. Rhubarb and soda

three times a day before meals was the only medication prescribed.

Shortly after the last examination reported, she obtained employment keeping her much in the open air in a neighboring country town. The vertigo has entirely disappeared. On April 17th, when she came to the city to see me, I was able to repeat the vestibular tests. The rotation tests gave normal reactions, and irrigation of her right ear with cold water showed rapidly returning function in the right vestibular nerve, *i.e.*, a typical nystagmus in 50 seconds.

In the light of all the facts, I feel justified in diagnosing this case as one of ptomaine poisoning giving rise to a neuritis of the right vestibular nerve.

#### CASE II—TONSILLITIS

*CASE II.* Miss B. R., a well known woman lawyer, and distinctly not of the neurotic type, was referred to me on March 18th, 1919, by Dr. Helen Baldwin. Her history is of attacks of vertigo dating back to the spring of 1916. Though varying in intensity at different times, they have rarely been wholly absent with the exception of a period of six months, *i.e.*, the latter part of 1916. The description of her attacks, which she kindly wrote out for me may be given in the own words: "The symptoms, so far as I can describe them are just dizziness, plain unmixed dizziness, practically without more than slight nausea. They have been acute enough to endanger my balance only once or twice. Mostly it is that the place goes black and revolves, but I can control external action pretty well. The dizziness comes on from but one thing, and one thing only, a change of level and angle of my head. Any change of angle, if at all sudden will do it, but the worst motions appear to be turning over in bed or looking up or down.

"I have tried to see some connection between these symptoms and other things and I am sure there has been one between the recurrence of these attacks and an equally mysterious trouble with the glands of my neck and throat. When the glands are swollen I am very apt to have vertigo, though each thing does sometimes occur absolutely alone."

*Examination.*—Both drum membranes normal. Hearing in both ears absolutely normal. The faucial tonsils are large, lobular, and present the crypts and depressions which might well harbor and retain septic matter. There was at this time very slight tenderness and enlargement of the lymphatic glands along the sterno-mastoid muscles.

*Vestibular Tests.*—Nystagmus following rotation lasts 20 seconds to the right, and only 14 seconds to the left. *Caloric Test:* irrigation of left ear with cold water gives a slower response by 10 seconds than of the right, and the nystagmus and subjective disturbance are shorter and less marked. Apparently some agency has been effec-

tive in this case in disturbing the balance between the two labyrinths by depression of the functional activity of the left.

*In my report on the case I suggested tentatively that septic matter absorbed through the tonsils might be acting injuriously upon an otherwise normal and healthy vestibular apparatus; and that removal of the tonsils would not only prevent the recurrent attacks of tonsillitis, but might cure the vertigo.*

Dr. Baldwin preferred to test this theory by the more scientific method of the laboratory. She took smears and cultures from the crypts of the tonsils and isolated "a short chain, haemolytic streptococcus." From this she had an autogenous vaccine made, and proceeded to try out its effect. One month later, she reported to me that the vertigo had "absolutely disappeared."

I have not seen the patient since, but one year after her two visits to my office I took the liberty of calling her up. Up to that time there had been no recurrence.

Apparently in this we have a reasonable inference of a toxic matter circulating in the blood and involving the left vestibular nerve, without in any way influencing the cochlear mechanisms.

If this patient in the future suffers a return of her vertigo,—and I anticipate that she will—I shall feel that we have a very logical indication as to the treatment for a permanent cure.

#### CASE III—FUNCTIONAL OTOSCLEROSIS

CASE III. Dr. S., a prominent New York physician, gave the following history: about one month ago, without previous illness, he experienced for the first time slight sensations of dizziness, lasting but a few seconds but recurring frequently during three successive days. On the third day, while in church, he suddenly became so dizzy that he could not stand without support but recovered sufficiently to walk home. On the night following, i.e., at 3 a. m., the following morning, he awoke with intense rotary vertigo, nausea and vomiting. The severity of these symptoms, which apparently were of vestibular type, confined him to bed for three days, when he was able to sit up.

I first saw him four weeks after the original attack. The vertigo had gradually and progressively subsided, but not so completely as to restore wholly his sense of a completely stable equilibrium.

*Examination.*—He walks with no difficulty in maintaining a straight course, but with a slight unsteadiness of gait.

There is no spontaneous nystagmus.

The hearing tests show fairly normal hearing for acoumeter and whisper in the right ear; appreciable impairment for the same in the left ear. The lower tone limit is 14 double vibrations in the right ear; 20 double vibrations in the left. The conspicuous auditory defect in both ears is the very considerable reduction of the upper tone limit as shown by the Galton whistle, i.e., 6.1 in

the right, and 4.4 in the left ear. The functional changes are quite similar to those seen in certain cases of oto-sclerosis involving the cochlea which have come under my care for impaired hearing.

*Vestibular Mechanism.*—Rotation to right is followed by wide and active eye movements to left lasting 16 seconds. Rotation to left is followed by comparatively slight but typical eye movements to right lasting only 11 seconds. The difference in the degree of the nystagmus in opposite directions (i.e., breadth of excursions) was as marked as the difference in their duration. Unquestionably the functional activity of the right vestibular nerve was reduced.

The interesting feature of this case to me was the functional status of the right ear. For all practical purposes the right was the better hearing ear, having a lower tone limit of 14 d. v., a hearing distance for acoumeter of 24 feet, and very good hearing for whisper and voice. The upper tone limit, however, was reduced to 6.1, and the functional activity of the right vestibular nerve was lost or greatly reduced.

To my mind, a possible key to this case is the very considerable loss of hearing for the upper tones of the musical scale (6.1 and 4.4 for the right and left ears respectively.) I interpret this as in part the result of a long-standing, but slowly progressive lesion affecting both cochleae, in which a recent super-imposed injury or disorder had involved chiefly or slowly the right labyrinth. What the exciting cause of this exacerbation was, whether the product of an auto-intoxication, ptomaine poisoning or what not, I have no way of determining. So far as any present disturbance of equilibrium, subjective or objective, is concerned, the patient has quite recovered. The upper tone limit has improved considerably in the right ear, remaining absolutely unchanged in the left. Further functional changes may throw light on this case, and he is still under occasional observation.

*Personally, I am inclined to believe that this patient suffered from otosclerosis or at least some morbid process affecting both auditory labyrinths, and that these changes were present long before the onset of the recent attack. If we assume this hypothesis to be correct, it is clear that the prognosis is in some respects less favorable than in cases attributable to a temporary upset or irritation of previously normal labyrinths. In this case, although the patient is at present free from subjective vertigo, the labyrinths are still in a state of pathologic change, or instability, as a result of which I should expect slight causes to result in future recurrent attacks of vertigo.*

#### CASE IV—STATIC LABYRINTH OTOSCLEROSIS

CASE IV. Mr. S. M., was referred to me by Dr. Howard Gillespie Myers, on July 11th, 1918. This patient, born in The Hague 38 years ago, submitted a voluminous and humanly interesting written history, giving detailed descriptions of his



attacks and submitting written reports on his case by specialists in The Hague, London, New York and Buenos Aires. Though he had suffered from vertigo since boyhood and though he stated that he had at times been so discouraged as seriously to have considered suicide, he was at that time vice-president of one of the largest banking institutions of this country, which position he still holds as manager of their London office.

His history in brief outline is as follows. At 4 years of age, he had suffered and rapidly recovered from an attack of acute purulent otitis media of the left ear. His hearing in that ear has been impaired since childhood and has become progressively worse with advancing years. In his tenth year, he began to experience attacks of vertigo which with variations in intensity had persisted ever since. The vertigo is described as always of a rotary type, and was formerly accompanied by nausea and vomiting. Of late years he has rarely vomited. An unusual premonitory feature is described as a sensation of congestion or heat in the head. To quote from his written report: "a particularly uncomfortable attendant symptom is the heat which in the course of the day and on any occasions demanding special concentration seems to develop in my head, and which invariably is the precursor of renewed giddiness." He states that he was often embarrassed in the company of strangers by the conspicuous blushing, or flushing of the face, which accompanied or presaged even the milder attacks.

At an age which he places at about 18 or 20 the patient first became conscious of an enlargement of the thyroids. This enlargement of moderate degree, but varying in size at different periods, has been present most of the time since. There has never been the slightest degree of exophthalmos, nor has any irregularity in pulse rate been noticeable.

The reports of various specialists in different parts of the world are interesting but not particularly instructive. One report, that of a Dr. Lopez of Buenos Aires, on the strength of a very weakly positive Wassermann reaction, made the diagnosis of congenital syphilis. Many repetitions of this test, however, have resulted negatively.

At the time of his first visit to me, nearly two years ago, the attacks of dizziness were increasing in frequency, and the patient was exceedingly anxious about his condition. He admitted, however, that they were of milder type than formerly.

**Examination.**—Both drum membranes fairly normal.

**Hearing Tests.**—Right ear showed practically normal hearing except as to upper tone limit. Galton shows 1.7. Left ear: Marked reduction of hearing for all sounds. Loud acoumeter heard at 5 inches. Lower tone limit 72 d. v.; upper tone limit 3.1.

**Vestibular Tests.**—Rotation to left followed by typical nystagmus with moderate vertigo, lasting 15 seconds. Rotation to right followed by

slight nystagmus, without subjective discomfort, lasting 5 or 6 seconds.

**Caloric Test.**—Cold irrigation of right ear is followed in 35 seconds by typical nystagmus to left, with the usual attendant phenomena of vertigo, etc. Both hands pass-point to the right. Cold irrigation of left ear is continued 1 minute, 45 seconds before a slight typical nystagmus to right is induced. No subjective vertigo accompanied this nystagmus and there was no disturbance of pointing accuracy.

*This is the only case of a non-suppurative ear lesion which has come under my observation in which I would have felt justified in operating upon the labyrinth for the relief of vertigo.* Here we had a history of continued or frequently recurring vertigo over a period of 25 years or more; of a normally hearing right ear, a markedly deaf left ear, and of very greatly reduced functional activity of the left static labyrinth. In my report to Dr. Myers, I stated my belief that the vertigo would persist so long as the left vestibular apparatus retained any functional activity, or irritability, and that I felt quite confident that an operation destroying the left membranous labyrinth would bring prompt and permanent cessation of the vertigo. I was about to leave the city for a two months' vacation, however, and no operation was decided on. Shortly thereafter the patient went to London to live.

In March, last, during a hurried business trip to this country the patient called to see me. He reported that during the past six months he had been quite free from vertigo. Hearing tests of the left ear showed absolutely no change since my first examination, i.e., acoumeter 5 inches; lower tone limit 72 d. v.; upper tone limit 3.1.

The caloric test (cold) of the left ear now gave absolutely no reaction. *The absolute loss of vestibular irritability in the diseased ear has occurred much sooner than I thought would be the case. If this paralysis of the left vestibular nerve is absolute and permanent, there is no reason to believe that he will have any return of the vertigo.*

*As to the exact nature of the ear lesion, this patient has been examined by otologists and neurologists in four countries, and their interpretations are of variance. I am inclined to believe that it is an unusual case of otosclerosis involving chiefly the anterior or static labyrinth.*

#### CASE V—NERVO-FIBROMA OF THE ACOUSTIC NERVE

CASE V. Miss H. V. E., then 19 years of age, was referred to me on May 20th, 1914, by Dr. Seymour Hinsdale, who submitted the following unusual history: Five years previously, at the age of 14, the patient without demonstrable signs of middle ear inflammation, past or present, began to complain of pain in left mastoid region. This had been an intermittent symptom since it was first complained of. Six months before her first visit to my office, she suffered an attack of lobar pneumonia, which was complicated by an

acute purulent otitis media; of the right ear. During the acute stage of this lesion, which was healed in three weeks, there had been well marked mastoid tenderness.

*Recent History:* During several weeks previous to my seeing her, she had complained more or less constantly of bilateral occipital headache. There had also been occasional pain in the left mastoid. During this time, the left mastoid had constantly been sensitive to pressure,—this sensitiveness varying at different times. The temperature had once or twice reached 99.5,<sup>o</sup> but was most of the time normal. Repeated differential blood counts had shown no abnormality. Dr. Hinsdale's notes as to the patient's constitutional type refers to her "nervous temperament, and mild hysterical and melancholic tendencies."

*Notes From My Examination of the Ears.* May 20, 1914.—"Examination of drum membranes and auditory canals reveals no signs of inflammation. Left mastoid is exceedingly sensitive to pressure from antrum to tip. There is also slight oedema along and behind the left post-auricular fold."

*Hearing.*—Normal in right ear. Left ear: Lower tone limit 43 d. v. Bone conduction and Rinne could not be estimated on account of extreme sensitiveness to pressure. Owing to the contradictory character of the symptoms and a very evident hysterical factor in her condition, a waiting attitude was decided on.

In the interest of brevity, I shall summarize rather than give in detail the successive hearing tests which showed the most surprising variation at different times. Taking the lower tone limit as a basis of comparison, this at the first examination on May 20th was 43 d. v., on June 29th was 60 d. v., on October 23d was 212 d. v., and on December 29th had returned to 48 d. v. In other words, during this period the hearing in the left ear was subject to startling and exceedingly puzzling variations. The symptoms which engaged the patient's attention, however, and for which she demanded relief, was not the impairment of hearing, but the more or less constant and very harassing mastoid pain.

The *caloric tests* made on July 3d, 1914, gave positive and normal reactions in both ears.

On January 15th, 1915, and exploratory mastoidectomy was performed. This operation revealed no evidence of a suppurative or inflammatory process. The wound healed quickly. As a result the patient seemed free from pain during the first 3 to 4 months, when she began to complain of pain, and shortly thereafter she was in precisely the condition existing before the operation.

The subsequent symptoms, obtained from Dr. Hinsdale, from my own examination of the patient at long intervals and the reports then obtained from her, are interesting and can be described in a few lines. Almost continuously she has complained of pain in and behind the left auricle. Always, when I have seen her, the aur-

icle and region behind the ear, extending usually considerably beyond the borders of the mastoid process, were exceedingly sensitive to pressure or manipulation.

The hearing in the left ear, I have not personally been able to keep track of, but it has gradually failed. Some time after the mastoid operation, the patient in addition to progressive loss of hearing began to experience periods of dizziness or vertigo. So far as she is able to describe these attacks they have never been of the extreme vestibular type. Instead of the usual abrupt onset with nausea and vomiting and the bewildering sense of rotation and loss of body control, the attacks came on gradually. At first with only moderate and momentary sensations of dizziness, the attacks gradually became more frequent, prolonged and pronounced. From the description obtained from the patient, the vertigo was of rotary type, but never approximated the severity characteristic of the onset of an acute suppurative labyrinthitis. *The persistence or intermittence of these anomalous vertigo attacks possibly corresponded roughly with the peculiar variations in the hearing power which characterized the progress of the early years of this lesion; and finally the cessation of the vertigo—for she no longer experiences any subjective disturbances of equilibrium—probably coincided with or closely followed the ultimate complete loss of function in the left vestibular nerve.*

As to the diagnosis: In December, 1916, the patient was referred to Dr. J. Ramsay Hunt for an opinion. Dr. Hunt diagnosticated the lesion as "a neuro-fibroma of the acoustic nerve." In his letter, stating this belief, he said, "My reasons for believing this are: The long duration of the case with headaches; the gradual progression, progressive loss of hearing, including vestibular function; the subsequent development of vertigo."

My last examination of the patient was on April 22d, of the present year. At twenty-five, she looked rather frail but almost as girlish and hardly older than when I first saw her six years ago.

*Examination showed that the left ear was absolutely deaf and that the left vestibular nerve was absolutely dead or inactive functionally.*

Whether Dr. Hunt's diagnosis is correct I am unable to say, but at least I have no better to offer. Hysteria might explain certain aspects, e.g., the pain, but could not explain the demonstrable loss of function in two cranial nerves. It seems clear at least that the lesion is an intracranial one affecting the nerve trunks, rather than intra-labyrinthine, involving the cochlear and vestibular end-organs.

*Prognosis.*—I should say that there is little probability that there will be any return of hearing power, or recurrences of vertigo. If the lesion is a gradually enlarging tumor involving the acoustic nerve, it seems a not remote prob-



ability that it will, unless surgically removed, cause the patient's death within the next decade.

#### CASE VI—VERTIGO OF VESTIBULAR PARALYSIS

CASE VI. Mr. J. M. C., a business man, 53 years of age, of Pittsburgh, was referred to me on June 13th, 1919, by Dr. Frederick W. Bode of that city. The history was as follows: On November 23d, 1918, the patient was in an automobile collision accident, in which he was thrown against the side of his car, a limousine, striking his head and immediately losing consciousness. When he recovered consciousness, which he thinks occurred in 10 minutes, he was bleeding from the nose, mouth and both ears, the right side of his face was paralyzed, and he was completely deaf in both ears. After removal to his home, he lapsed into a state of semi-consciousness, and then into a stupor which lasted 24 hours.

For a week or ten days following his recovery of consciousness, the patient has no clear or orderly impression or recollection of his symptoms. He believes that he first noticed slight return of hearing power at the end of a week. He has absolutely no memory of a typical vestibular attack, *i.e.*, he recalls nothing of the intense rotary vertigo, nausea, vomiting, and other attendant phenomena characteristic of a sudden injury to the labyrinth. When, however, he was able to be up and about, he was unsteady and was frequently dizzy. In, January, 1919, when he considered these symptoms rapidly mending, he suddenly, when looking down to brush his coat, lost his sense of equilibrium and fell before he could reach anything on which to support himself. After this experience he was more cautious, but even as late as March, 1919, he experienced a sudden attack of vertigo so severe that he was unable to save himself from falling. He stated that these severer attacks always seemed to be caused by some incident, impulse or need causing him to look downward, *i.e.*, by the sudden bending of his head downward. The vertigo in this case was undoubtedly of the type which the writer was the first to describe in detail and which he called the "vertigo of vestibular paralysis."\* It is a type of vertigo with the seriousness of which every otologist and neurologist should for the safety of his patients be thoroughly familiar.

*Examination.*—Right drum membrane was congested and showed plainly the physical signs of the recent lesion. Left drum membrane was intact but congested.

*Hearing Tests.*—The patient was so extremely deaf that only by very loud tones could one communicate verbally with him. Right ear: Lower tone limit, 256 d. v., upper tone limit (loud Galton whistle) 10.5. Apparently he could hear large tuning forks of 256 d. v. and higher, when set in forcible vibration for a period of 2 or 3

seconds. With a noise apparatus in the left ear, however, it was impossible for him to understand words even when shouted in the right ear. Left ear: Lower tone limit, 36 d. v. Upper tone limit 3.0.

*Rotation Tests.*—Rotation in either direction was followed by a short lived and weak nystagmus, accompanied by little or no subjective vertigo or discomfort and rather more definite toward the left than to the right.

The caloric tests were not used in this case, because the functional status of the vestibular nerves was sufficiently demonstrated by the symptoms and the rotation tests, and the sudden application of heat or cold after a traumatic injury of such severity seemed to me not without danger.

*It was clear that the patient had sustained a serious organic lesion, either in the nature of a labyrinthine hemorrhage or rupture of the membranous structures of both labyrinths.*

As the patient came to New York for a consultation as to his condition and returned to Pittsburgh on the following day, I have had no opportunity of making a second examination. Dr. Bode, however, has kindly written me as to his condition. In his comparatively recent letter he stated that the vertigo had completely disappeared, and that there were periods lasting sometimes a day or two in which the hearing seemed to show considerable spontaneous improvement, then lapsing again into extreme deafness. I regret that I am unable to report from definite knowledge the exact functional changes which may have taken place. It is probable that the complete cessation of vertigo is not attributable to any improvement in the actual condition of the vestibular mechanisms, but to re-education and re-establishment of balance through what remains of vestibular function and the compensatory activity of other senses (tactile, muscular, arthrodial).

#### CASE VII—CONCUSSION LABYRINTHINE VERTIGO

CASE VII. Mr. F. G., a man of 55 years, was referred to me by Dr. Henry K. Marks, on October 24th, 1918. This case, like the preceding, is reported for the interesting reactions to functional tests following an accident. On February 10th, 1918, some eight months before he came to my office, the patient was thrown from an automobile, striking on the right side of his face. The most obvious immediate injury was a concussion of the right side of his face, which closed the right eye. His history is of vertigo at the time which appears not to have been of the severe type characteristic of a sudden injury to the labyrinth, and from which he soon recovered.

Previous to this accident he had always believed his hearing to be perfect. From the time of the fall, however, or very shortly thereafter, he had noticed that the hearing in the left ear—the ear corresponding to the side opposite to that

\*Vertigo of Vestibular Paralysis: Kerrison. Trans. Amer. Otol. Soc., 1915.

on which he had sustained the concussion—was appreciably impaired. He complained also,—and this was the symptom for which he chiefly sought relief—of a frequently recurring sense of mental oppression or confusion,—not sufficiently pronounced to disable him for routine work, but sufficiently troublesome to be exceedingly harrassing and to reduce considerably his efficiency as a man.

While he did not complain specifically of vertigo, it was easily demonstrable that he did suffer from some disturbance of equilibrium. He could stand fairly steadily in the Romburg position with eyes closed. He could also in walking with eyes closed maintain a fairly straight line, but it was evidently a triumph of will and the re-education of the accessory factors in equilibrium (tactile and muscle senses). The unsteadiness of gait in walking, with eyes closed, showed also the important place which the sense of sight had been called upon to fill in the complex mechanism of orientation and equilibrium.

**Hearing Tests.**—For a man of 55 years the hearing in the right ear was normal. In the left ear, the acoumeter was heard 7 feet; hearing for voice and whisper was moderately impaired; lower tone limit was 20 d. v. (same as in right.) The upper tone limit in the left ear, however, was enormously reduced, a small clear sounding Galton whistle being unheard throughout its entire range.

**Vestibular Test.**—In brief, the caloric re-action in the left ear was almost nil, very slight indefinite eye movements appearing after one minute and thirty seconds of irrigation. The nystagmus following rotation lasted 18 seconds to the right and only 12 seconds to the left. *Apparently we have in this case a fairly logical inference of a labyrinthine lesion due to concussion, which practically suppressed the function of the left static labyrinth and involved the cochlea only in that portion concerned with the perception of tones belonging to the upper end of the musical scale.*

The history suggests two somewhat puzzling questions, i.e., (a) why the lesion should have been produced in the left (uppermost) ear, instead of the right on which side he fell and struck. It is clear, however, that in a rigid container like the skull cap, all structures therein are about equally involved in the sudden arrest of motion resulting from such a fall and impact; (2) the question naturally occurs to me as to why the accident was not immediately followed by more intense vertigo. This, perhaps, may be answered by a hypothesis that the accident resulted in a slight membranous rupture or gave rise to a very minute oozing hemorrhage, the resulting degenerative changes of which were of slow development.

This man was treated by small doses of iodide of potassium, and I am informed by Dr. Marks that his symptoms have completely disappeared.

This case furnishes an interesting contrast

with Case V, in which the lesion was as clearly located in the nerve trunks as it may here be placed within the labyrinth.

All of the cases so far outlined may be considered broadly as belonging to one general class, i.e., as cases of *Labyrinthine Vertigo* since, though tracable to quite varied causes or lesions, the vertigo itself is in every case attributable to a disturbance of vestibular function. As the otologist is occasionally called upon to pass judgment on cases of vertigo in which a vestibular pathway cannot be traced or demonstrated, brief reference to two cases of different types may be in order.

**CASE VIII.** Mr. C. L. M., a merchant of Birmingham, Alabama, was referred to me by our confrere, Dr. E. W. Rucker of that city. The history dates from a mastoid operation on the right ear ten years ago, before he came under Dr. Rucker's care. He states that he clearly remembers that he was exceedingly dizzy during the week preceding this operation, and intensely so during the week following, i.e., to the extent that for several days it would have been impossible for him to stand without support. Practically ever since this operation he has been in ill health. This protracted illness was characterized by very frequently recurring attacks of nausea and vomiting with certain associated phenomena, including some degree of subjective vertigo. While these attacks were regarded as of gastro-intestinal origin, all treatment based on that hypothesis was ineffective. Two years ago his appendix was removed. About a year ago an exploratory laparotomy at the Mayo Hospital in Rochester is said to have demonstrated a small duodenal ulcer, but the operation was quite without influence upon the symptoms. Shortly after this, he went to Chicago to consult a well known otologist of that city. After a careful survey of the case, including repeated examinations, this specialist arrived at the conclusion that the seat of the trouble was in the right labyrinth, and advised a labyrinthine operation. Being unwilling to immediately accept this proposition, he came to New York and consulted a very prominent otologist, who failed to find definite indications for re-operating on the ear, and said that operation, if decided upon, must be regarded as exploratory.

My own examination was asked for the purpose of throwing any additional light on these rather contradictory reports. The facts I found to be as follows: The right ear—that on which a mastoidectomy had been performed ten years previously—was absolutely deaf and the vestibular mechanism was functionally dead, i.e., the caloric test was negative. (This, I think, by a process of exclusion was the basis of the Chicago opinion.) *The patient suffered from a profuse nasal discharge indicating sinus disease which X-ray photographs in Chicago and New York failed to demonstrate.* The patient's pe-



cular attacks were always accompanied by nausea and vomiting and such subjective vertigo as was present was not of rotary type. In fact, it occupied a distinctly minor position in the patient's conception of his subjective symptoms-complex. There was no spontaneous nystagmus.

I am glad now that my opinion in substance was stated in definite terms: *i. e.*, (a) that the right labyrinth, both as to the cochlear and the vestibular mechanism, was functionally dead; (b) that such a condition after the first few days or weeks of vestibular upset, never causes nausea and vomiting; (c) that the patient described no symptoms which could be interpreted as vestibular vertigo, and (d) that any operation on the ear was contra-indicated. This view, I believe, had been Dr. Rucker's interpretation of the case, the various consultations being as much to satisfy the patient as for new light on his aural condition.

In a letter received from Doctor Rucker and dated April 15th, 1920, he says: "*It is with a great deal of pleasure that I am able to tell you that shortly after my return from New York in the fall, I removed Mr. M.....'s tonsils, giving him complete relief of his symptoms.*"

The lesson which this case has for the otologist certainly does not require elaboration.

#### CASE IX—AN UNSOLVED CASE

CASE IX. Mr. H. S. R., a man of 38 years, was referred to me on March 2d, 1920, by Dr. Arnold Knapp. His history was as follows: A little over a year ago he experienced a peculiar attack of vertigo of moderate intensity, accompanied by nausea but without vomiting. This initial attack lasted with varying intensity throughout the day. His sensations during an attack, as he described them, are not of rotation, but of light-headedness accompanied by a distressing subjective impression of side-to-side oscillation or swaying of his body. These symptoms in frequently recurring attacks have persisted ever since. Nausea, present in first attacks, he no longer experiences. While the attacks are not of sufficient severity to incapacitate him for business, they are exceedingly trying.

*Ears.*—Both drum membranes were normal, and in both ears the hearing was quite normal.

*Eyes.*—There is no spontaneous nystagmus. On rotating the eyes in either lateral direction there is developed a peculiar nystagmus differing from that known to us as the vestibular type, in that there is little or no difference in the speed of the eye movements in opposite directions. It is rather a rapid and wide horizontal, or side-to-side oscillation of the eye.

*Rotation Test.*—Rotation in either direction produces a nystagmus typical in kind, but rather unusually strong, producing very pronounced subjective vertigo and discomfort and lasting 40 seconds to the left and 45 seconds to the right. In trying to discover some relation between these

symptoms or reactions and his vertigo it seemed to me that we might in this case have to do with a condition of marked hyper-irritability of both vestibular nerves.

Questioning the patient brought out the fact that he had suffered for years with a most obstinate and extreme form of constipation. He stated that the passing of three days without a movement of the bowels was not very unusual, one day without a movement being very common. He had come to the conclusion that this was a peculiar physiological condition with him. It seemed a reasonable hypothesis that this condition might effect such delicately sensitive structures as the vestibular nerves in one or both of two ways, *i. e.*, (1) by intracranial congestion and pressure from a disturbed circulation; and (2) by auto-intoxication, and nerve irritation by toxic matter circulating in the blood.

This patient lives in another part of the state, having come to New York for consultation as to his vertigo. He has, however, kept me informed by letter as to the course of his symptoms. Through appropriate remedies his constipation has been corrected. The vertigo, however, has not been relieved, though its character has been somewhat modified, and there have since developed certain other clinical features, which cannot be described here, but which seem definitely to point away from the labyrinths as even a contributory cause.

I purposely cite this case as one of a mistaken diagnosis. An analysis of the symptoms shows that they do not actually coincide with any accepted theory of vestibular disturbance or disorder. The nystagmus following rotation was approximately the same in type and duration in opposite directions. The peculiar eye movements on voluntarily rotating the eyes in either lateral direction were distinctly not of any recognized vestibular type. My tentative diagnosis somewhat resembled an empirical line of treatment, in that it was based on no established chain of evidence. Such a diagnosis oftener than not leads nowhere though the patient may recover. In this instance the patient has not recovered, and probably will not until he is subjected to further examination at the hands of some man capable of determining correctly the underlying cause.

#### RESUME OF ETIOLOGIC FACTORS AND RESULTING LESIONS

Cases I, II and III are grouped together as cases of vertigo due to extra-aural toxins. Case I and II seem incontrovertibly to be instances of vestibular nerve neuritis due to the influence of toxic agents of extra-aural origin upon a previously normal and healthy vestibular mechanism. In each case but a single nerve was involved, and the cochlear nerves and auditory labyrinths were not affected. In each case recovery followed removal of the cause.

*Note.*—On comparing the histories I and II, it

is clear that the differences in symptoms are logically attributable to differences in the lesions. In Case I, sudden and complete loss of nerve function gives rise to the most extreme degree of vestibular disturbance, gradual and progressive recovery keeping pace with restoration of nerve function. In Case II alternating irritation and depression of the left vestibular nerve, probably never reaching complete suppression of function, causes vertigo of less degree, but showing no tendency to permanent recovery, until immunity or sensitisation was established through an appropriate vaccine.

In Case III, the diagnosis of a chronic non-suppurative ear lesion antedating the vertigo attack must remain for the present an hypothesis, since I have no actual knowledge of his auditory condition before the attack. However, that may be, the immediate cause of the sudden attack of vertigo was apparently a toxic agent (ptomaine?) suddenly striking the right cochlear and vestibular nerves. It is a suggestive fact that a recent examination showed a return of function in the vestibular nerve, the cochlear recovery lagging behind.

Case IV, is of a persistent vertigo of many years duration, depending upon a diseased and unstable left static labyrinth. It illustrates a perfectly logical sequence of events in the final cessation of vertigo as a result of complete paralysis, or loss of function, of the left vestibular nerve.

*Note.*—This undoubtedly was one of the very few favorable cases for a labyrinthine operation for the relief of vertigo. It is also a case which would have afforded a sound basis for a positive prognosis of early relief if one could have foretold the course of the nerve lesion, *i. e.*, the early complete loss of nerve function. Had the labyrinth been operated on shortly after his first visit to my office, the vertigo would have been relieved a year or more earlier than it was, but he would have lost the small, though potentially useful residue of hearing which this ear still retains.

Case V, is particularly instructive in showing that a very slowly developing lesion, *e. g.*, a benign tumor, exerting gradual pressure upon, or organic changes in, the vestibular nerve may completely destroy its function and yet cause vertigo of so mild a type as hardly to meet the otologic conception of a vestibular seizure. Like Case IV, it also illustrates the logic of cause and effect in the final disappearance of vertigo as an active symptom with the ultimate functional death of the nerve.

Case VI, *i. e.*, of vertigo following a severe and direct injury to both membranous labyrinths, is of particular interest just now, because of its analogy with cases seen at the front and studied in observation camps during the recent war. So far as one case may, it supports the view, based on the observation of specialists who studied

many cases of direct injury to the organ or hearing, *e. g.*, by projectiles, bits of shrapnel, etc., that such direct injuries of the labyrinth frequently cause profound or complete and permanent deafness, but that the resulting disturbance of equilibrium is rarely permanent.

Case VII furnishes an interesting pathologic contrast with Case V, in which the lesion was as clearly located in the nerve trunks as it may here be placed within the labyrinths.

Case VIII has one lesson for the otologist, and one only, *e. e.*, that if we permit ourselves to advise a labyrinthine operation on the strength of symptoms not of accepted or recognized vestibular type, that advice may be costly to the patient and to our own reputation.

#### BASIS OF PROGNOSIS

Irrespective of variations in the pathology, we shall have a surer foundation upon which to base a prognosis if we keep in mind these facts: (1) Vestibular vertigo may be relieved by a spontaneous arrest in the progress of the primary lesion. The vestibular mechanism, though functionally impaired, becomes quiescent or stable in its impairment, so that the opposite normal labyrinth and the other accessory factors in equilibration (tactile, arthrodial and muscle senses and the special sense of sight) become completely compensatory. This as a temporary condition, coincident with the intervals between recurrent attacks, is probably common enough. As a stable condition it is rather a theoretic possibility. (2) Actual cure or permanent cessation of a vestibular vertigo can be brought about only in one of two ways, *i. e.*, (a) by actual restoration of the vestibular nerve and end-organs to a normal condition; or (b) by absolute nerve paralysis,—*i. e.*, absolute loss of vestibular function. Our prognosis is favorable and to be relied upon, therefore, only as we can foresee one or other of these eventualities.

#### COMPARATIVE VULNERABILITY OF THE COCHLEAR AND VESTIBULAR NERVES

The experiences of the war have shown conclusively that, short of direct mechanical injury of the labyrinth, *i. e.*, gun shot wounds, bits of shrapnel, etc., the vestibular nerve is comparatively insusceptible to injuries from without. Thus, sound concussions, the shock of loud detonations, sudden air compressions as from explosions within a confined space, which often profoundly affect the cochlea, affect the vestibular mechanism little or not at all. Not a single instance of serious injury to the static labyrinth from such causes was reported.

We all know, also, that chronic non-suppurative lesions of the ear involve the cochlea much more frequently than the static labyrinth. This is shown by the comparative frequency with which a cochlear defect can be demonstrated in deaf patients who have never suffered from vertigo,



and in whom no vestibular loss of function is present. On the other hand, there has seemed to me reason to believe, and I believe that the experience of others will tend to support this statement, that the vestibular nerves have rather a special susceptibility to the influence of toxic agents reaching the ears by the vascular or lymphatic systems,—*e. g.*, from the various forms of intestinal auto-intoxication, infection through diseased tonsils, dental root infections, and foci of suppuration in different parts of the body.

#### SUMMARY OF CONCLUSION

1. As otologists we are not necessarily charged with the responsibility of analyzing the various extra-aural lesions or disorders, of which a vestibular disturbance may be an expression. We should, however, be able to determine whether, and in what portions, and to what extent, the labyrinth is involved.

2. Constant or semi-constant vertigo as a result of a functionally dead labyrinth is practically a clinical impossibility. Coincidence of a functionally inactive labyrinth and prolonged or persistent vertigo suggest, therefore, either that (a) the labyrinthine lesion is potentially active and progressive, or (b) the vertigo is intercurrent and to be otherwise accounted for.

3. In vertigo of purely vestibular type, relief

occurs in one of two ways: (a) by restoration of normal nerve tone and function, or (b) by absolute nerve paralysis or destruction.

4. The vestibular nerves, comparatively invulnerable by injuries from without, seem rather susceptible to toxic agents reaching the ears by the blood or lymph streams.

5. Vertigo depending upon a vestibular nerve neuritis of recent development—the cochlear mechanism escaping injury—recovers quickly when the cause is removed.

6. In vertigo depending upon a chronic non-suppurative lesion involving the static and auditory mechanisms alike, the prognosis is exceedingly uncertain, *i. e.*, the probability of the current attacks from slight causes is very considerable.

7. Cases of vertigo beginning with a sudden onset of severe and characteristic vestibular type give as a rule a distinctly more favorable prognosis than do the more indefinite types of gradual development.

8. From an otologic viewpoint, vertigo of non-vestibular type, even in the presence of a demonstrable vestibular lesion, constitutes a very questionable basis for either a prognosis or a plan of treatment.

58 WEST 56TH STREET.

## The Physiology of the Normal Thyroid and the Physiology of the Thyroid in Exophthalmic Goiter\*

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Editor's Note.—Physiologically the lung has to do with external respiration while the thyroid has to do, in some important way, with internal respiration or the utilization of oxygen by the tissues. This activity has been shown to be dependent upon the presence of organic iodine. This store of iodine normally consists of inactive iodine, for the most part in the cells, and of active iodine, for the most part, in the colloid or thyroglobulin. In all species of animals with the ductless thyroid, the iodine store is decreased in the hyperplasia. As soon as the store of iodine falls below 0.1 per cent. active, hypertrophic and hyperplastic changes in the thyroid begin. Physio-pathological studies would indicate, from the experience of Dr. Marine, that the essential cause of exophthalmic goiter must be sought for outside of the thyroid. The same variations in iodine store are observed in exophthalmic goiter as in the simple type. The administration of iodine causes a marked morphological change toward involution in any existing degree of hyperplasia. Another manifestation of thyroid insufficiency in exophthalmic goiter is the occurrence of congenital goiter in babies born of mothers with active exophthalmic goiter.

A STUDENT of the thyroid cannot escape noticing its close association with the lung—embryologically, anatomically, physiologically and pathologically. Embryologically both develop at approximately the same time and very early as adjacent, unpaired, median, tubular, ventral down growths from the endoderm of the fore gut. Both divide into right and left halves. The duct of the lung becomes the tra-

chea and that of the thyroid normally undergoes complete absorption, beginning as early as the fifth week. Under abnormal conditions and especially as a result of maternal thyroid insufficiency as occurs spontaneously in endemic goiter districts and as may be produced experimentally, by removing most of the thyroid from the mother just before impregnation, absorption may not take place and more or less of the embryological duct surrounded by or replaced by true thyroid follicles persists. The primitive alveoli of both the lung and the thyroid have many points of similarity as regards the capillary net-

\*Read before the Joint Session of the Medical and Surgical Sections of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 3, 1920. From the H. K. Cushing Laboratory of Experimental Medicine, Western Reserve University Medical School.

work around the alveoli and the alveolar epithelia.

#### THE THYROID AND INTERNAL RESPIRATION

*Physiologically, the lung has to do with external respiration, while the thyroid has to do in some important way with internal respiration or the utilization of oxygen by the tissues.* Indeed, this is the only known function of the thyroid. This function was first indicated by Magnus-Levy in 1895, in cases of Gull's Disease or spontaneous myxoedema. He showed that in myxoedema the rate of metabolism was much lowered and that by feeding thyroid the rate of metabolism could be raised. Also Magnus-Levy was the first to demonstrate that as regards metabolism, exophthalmic goiter was the opposite of myxoedema. This work has been confirmed from many sources as regards experimental and spontaneous myxoedema. And as regards exophthalmic goiter it has so developed that now the rate of metabolism is the best available basis of classification.

#### HYPERPLASIA AND THE IODINE CONTENT

This physiological activity has been shown to be dependent upon the presence of a very stable organic compound of iodine, which, beginning with the discovery of iodine as a normal constituent of thyroid tissue by Baumann in 1895, and the successive attempts to isolate the substance, has been known as iodothyrene, iodothyroglobulin (Baumann and Roos), thyroidine (Oswald) and thyroxine (Kendall.) This substance is elaborated slowly even in the most favorable experimental conditions.

Iodine is a constituent of the normal thyroid of all animals with the ductless thyroid. As shown by our experiments on the rapidity of absorption of iodine by the thyroid, its elaboration into the active hormone and by alkaline hydrolysis as introduced by Kendall, iodine exists in the thyroid in an active and an inactive form. That is, the elaboration of the hormone goes on slowly from the inactive iodine collected from the blood. The excess of physiologically active iodine is for the most part stored in the *colloid* or *globulin* of the alveoli and it is believed the colloid serves merely as the vehicle or means of storing the excess of this remarkably active substance in a harmless manner. *The store of iodine, then, normally consists of inactive iodine, for the most part in the cells, and of active iodine, for the most part in the colloid or thyreoglobulin.* This store of iodine shows wide variations in any series of animals. These variations reach their maximum in the so-called goiter districts and their minimum in nongoiterous districts. Further these variations in iodine store have been shown to have an intimate relation with the histology of the gland. *Thus, in all species of animals with the ductless thyroid, the iodine store is decreased in the hyperplasias.* This decrease is propor-

tional to the degree of hyperplasia. In mammals, *e.g.*, dogs, sheep, ox, pig, rabbit, cat and man, it has been shown that normal thyroids have the highest percentage of iodine, averaging 0.2 per cent. with extremes of 0.1 and 0.5 per cent. *It has been further shown that as soon as the store of iodine falls below 0.1 per cent. active hypertrophic and hyperplastic changes in the thyroid begin.* In other words, no functional hyperplasia and, therefore, no goiter can develop, at least in the mammals above mentioned, if the iodine store in their thyroids is maintained above 0.1 per cent. This iodine store may be rapidly and markedly increased by the administration of exceedingly small quantities of iodine in any known form and through a great variety of means, such as inhalation, enteral and parenteral administration or cutaneous application, and as indicated above, marked histological changes are at the same time brought about in hyperplastic glands; *viz.*, the arrest of the hypertrophy and the involution or return of the thyroid cells to their resting form.

Failure to recognize this effect of iodine, I believe, accounts for thyroid changes described some years ago by Pemberton and Sweet, which they thought resulted from removal of the spleen and the external secretion of the pancreas in dogs, and explains why Halsted failed to get compensatory hypertrophy of the remaining thyroid stump following partial removal of the thyroid.

#### INTER-RELATION OF THE THYROID TO OTHER GLANDS

Of the inter-relationship of the thyroid to other glands we are only on the threshold of definite information. There is some vague evidence of a pituitary-thyroid, thymus-thyroid, lymphoid tissue-thyroid, sex gland-thyroid inter-relationship, but we have no definite idea of their nature. On the other hand, there is more definite evidence of the relation of the thyroid to the tissues of external respiration (lung and hemoglobin). Extensive pulmonic disease, acute or chronic, leads to well marked evidence of increased thyroid activity, so also in severe anaemias. Also we have some definite evidence of a thyroid-adrenal interrelationship as suggested by Eppinger, Falta and Rudinger and developed by Asher and Flack; *viz.*, that stimulation of the thyroid nerves with the thyroids intact causes a greater systemic response to a subsequent dose of adrenalin than is otherwise obtained. This is interpreted at present as indicating that stimulation of the thyroid nerves causes an increased amount of the hormone to be discharged into the circulation which sensitizes the tissues to stimulation of the sympathetic nervous system by adrenalin. The Goetsch test in exophthalmic goiter is a practical application of this work. We should not forget that the adrenal probably occupies a similarly close relationship with all



other organs innervated by the sympathetic nervous system if we are to retain our proper scientific perspective. The analogy popularized some years ago by Crile in likening the adrenal to the magneto of an automobile may well be kept in mind in the study and evaluation of these inter-relationships.

Summing up and restating some of the major features of thyroid physiology mentioned above, it can be stated that the only known functional activity of the thyroid is dependent on the iodine containing hormone elaborated within the cells and stored in the colloid or given up to the blood in infinitesimal small amounts. That the pharmacological or drug action of desiccated thyroid likewise depends on the amount of this iodine containing hormone, hence the compulsory standardization of commercial thyroid preparations.

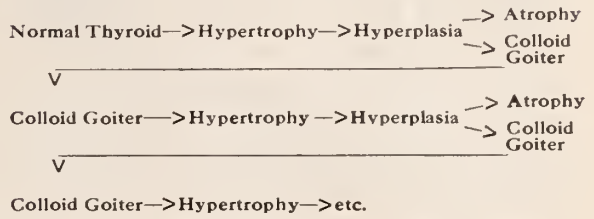
#### THE PHYSIO-PATHOLOGY OF EXOPHTHALMIC GOITER

Turning to the pathologic physiology of the thyroid in Basedow's Syndrome, we find a confusing and controversial literature. Most of the literature is concerned with human observations for it has not been produced experimentally in animals nor has its spontaneous occurrence in animals been demonstrated. *In general it has been found that the gland in exophthalmic goiter is capable of and presents the same cycle of reactions as does the gland in other clinical associations. And further, it has not been demonstrated that the anatomical and physiological reactions are essentially different from those seen in animals. In other words, we must look for the essential cause of exophthalmic goiter outside of the thyroid.*

As regards the pathologic anatomy of the thyroid in exophthalmic goiter, one may find the syndrome present very rarely in individuals with normal thyroids. Active hyperplasia of some degree is present in probably 70 to 75 per cent. of the cases routinely operated on in a large clinic. Mild degrees of fibrosis and atrophy supervening in the active hyperplasias are often seen in the late stages of the syndrome. Colloid goiters (involutions from hyperplasias) are often present. Adenomas of widely different morphology have long been associated with the syndrome and finally there are cases of carcinoma of the thyroid with the syndrome more or less complete.

Whether one finds at the time of operation a normal and actively hyperplastic, a colloid, an atrophy or an adenoma depends in part on the liberality in diagnosis, on the stage and duration of the syndrome, on the use of iodine and the existence of a long standing simple goiter prior to the onset of exophthalmic goiter symptoms. I believe the thyroid in exophthalmic goiter may exhibit the entire range of morphologic changes seen in other clinical associations and no others; and that so far as can be determined

at present, the thyroid cell has but one physiological and anatomical cycle which may be represented schematically as follows:



and that the cells undergo this cycle whenever those bio-chemical disturbances in the animal's nutrition arise which excite the gland to increased activity, irrespective of the clinical associations.

#### THE IODINE CONTENT IN EXOPHTHALMIC GOITER

*The same variations in the iodine store observed in other animals and in other clinical associations and already referred to are found in exophthalmic goiter. That is, the iodine store varies inversely with the degree of hyperplasia. The store is composed of active and inactive iodine. The administration of iodine causes a great increase in the store and usually marked morphological changes toward involution in any existing degree of hyperplasia.*

Pharmacologically the action of exophthalmic thyroid is similar in all respects as determined by the Gudernatsch test (effect of feeding on the metamorphosis of tadpoles) to that of other animals and other clinical associations; viz., it varies directly with the iodine content. If it contains no iodine it may be fed in large amounts to patients with exophthalmic goiter or to tadpoles without any change in the rate of metabolism and if the iodine content is high it increases the rate of metabolism to the same extent that sheep thyroid of similar iodine content does.

#### OTHER GENERAL PHYSIOLOGICAL RELATIONS

Certain general physiological relations may be referred to. Partial removal of the gland tends to induce compensatory hypertrophy of the remaining portion (this reaction is modified by the amount of gland removed, by the species of animal, by the age, food intake of iodine and probably other as yet unknown factors) in exophthalmic goiter as in thyroids of other clinical associations.

Manifestations of thyroid insufficiency supervene in exophthalmic goiter as in simple goiter, the association, formerly considered as rare and accidental, is now looked upon as an important and intimate. *Another manifestation of thyroid insufficiency in exophthalmic goiter is the occurrence of congenital goiter in babies born of mothers with active exophthalmic goiter.* Three instances of this association have come to my notice. Whether it has the same significance as

congenital goiter of other clinical associations and why it could occur at all if the thyroid is secreting an excessive amount of a normal secretion are important questions and have an important bearing on our conception of the physiology of the thyroid in exophthalmic goiter.

The relation of tumors and especially the so-called adenomata to the symptom complex cannot be satisfactorily explained with our present knowledge. Morphologically similar adenomata may be seen in exophthalmic goiter and in endemic cretinism.

These facts are mentioned in order to guard against accepting as yet any hard and fast theory of exophthalmic goiter. In my opinion

this cannot be done. On the other hand, the effects of partial removal, the data of studies on metabolism, the effect of iodine, and of desiccated thyroid establish the existence of an increase in thyroid activity as accounting for the major and most important symptom of the disease—the increased rate of metabolism. From the standpoint of pathologic physiology, however, this over-activity of the thyroid seems primarily a purposeful or compensatory reaction due either to the exhaustion or partial loss of the regulatory control over oxidation processes normally exercised through the sympathetic nervous system.

MONTEFIORE HOME AND HOSPITAL

## The Etiology and Pathology of Exophthalmic Goiter with Special Reference to Their Bearing Upon Prevention, Prognosis and Treatment

André Crotti, M. D., Columbus

Editor's Note.—According to the studies of Dr. Crotti, in thyrotoxicosis a totally different histological syndrome is found than in simple goiter, namely, cylindrical hyperplasia of the intervalveolar and of the alveolar cells, the latter sometimes so marked as to fill entirely the alveolar lumen, decrease or absence of colloid and increased intervalveolar lymphoid tissue. It is important to distinguish between types of goiter as the thyrotoxic nodular colloid adenoma responds to surgical treatment far more readily and safely than the parenchymatous adenoma. While nervous symptoms are sometimes the dominant feature of the thyrotoxic syndrome it is still premature to consider them a causative factor. The clinical symptoms of Graves' disease point more and more to the functional interrelations of the various organs and endocrins of the body. Whenever one becomes pathologically involved its derangement repercusses upon the function of the others. The functional solidarity of the thyroid, the ovaries, the adrenals, the thymus and possibly the pancreas is beyond doubt. In the last analysis Graves' disease is a toxic thyroiditis. The condition is a medico-surgical disease and it is as wrong for the surgeon to turn loose a thyroidectomized patient without further medical care as it is wrong for the internist to let the safe surgical stage of the disease pass before referring the patient to the surgeon.

THE thyroid gland originates from a median invagination of the walls of the pharynx taking place in front of the second branchial groove, thus forming what later becomes known as the thyroglossus duct, which proliferates into a glandular organ called finally the thyroid gland. The thyroglossus duct being lined with cylindrical epithelium, the thyroid gland assumes at first the same cylindrical structure up to the fifth or sixth month.

Later on, this epithelium loses its cylindrical character and at the end of the seventh month the structure of the thyroid gland has changed considerably; an intense cellular desquamation takes place and fills the lumen of the alveoli, so that toward the end of the intra-uterine life the thyroid is composed of a uniform, non-differentiated mass of cells, pressed one against the other and containing only a few capillary vessels. The cause of the desquamation is still unexplained. Soon after birth, however, regeneration of the thyroid takes place; the epithelium shows itself

into epithelial cords forming finally alveoli lined with cubic or flat epithelium.

Consequently, it may be said that the thyroid passes through three different stages:

- (1.) The embryonic or thyroglossal stage formed by cylindrical epithelium;
- (2.) The foetal stage formed by a non-differentiated cellular mass; and
- (3.) The adult or vesicular stage.

### FOETAL REMNANTS AND ADENOMA

The embryonic and foetal types may leave behind them persistent inclusions in the thyroid. Wöelfer has shown that these inclusions of foetal parenchyma are not uncommonly found in the thyroid, and that they may result in the production of a tumor known as the foetal adenoma or Wöelfer adenoma. These tumors differ histologically from the ordinary forms of simple goiter. They constitute a pathological entity *per se*.

### PATHOLOGICAL CLASSIFICATION

Pathologically speaking, the simple goiter may be divided into two big classes, (a) the parenchymatous adenoma, and (b) the colloid ade-

\*Read before the Joint Session of the Medical and Surgical Sections of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 3, 1920.



noma. As said before, the foetal adenoma is in a class by itself.

The *parenchymatous adenoma* is represented by a hyperplasia of the parenchymatous cells, namely, the alveolar as well as the inter-alveolar cells. The alveoli retain more or less the size and form found in normal thyroids. The colloid is not materially increased.

In the *colloid adenoma* the size and form of the alveoli vary considerably; they are irregular, dilated and prone to cystic formations. The amount of colloid is considerably increased and thickened.

Parenchymatous hyperplasia, and colloid degeneration may involve the whole thyroid in a more or less uniform way, or be localized to a certain portion of the gland only. In the first case we have to deal with a diffuse parenchymatous, or a diffuse colloid adenoma, as the case may be. In the second case we will have a nodular parenchymatous, or a nodular colloid adenoma.

Cystic or calcareous formations are usually mere degenerative processes of the nodular colloid adenoma.

*These preliminary remarks are necessary to help us understand the pathology of the thyroid gland in thyrotoxicosis; for in that disease we find that the same pathological classification answers the purpose very well, with the great difference, however, that in thyrotoxicosis we find an histological syndrome totally absent in simple goiter, namely, cylindrical hyperplasia of the interalveolar and of the alveolar cells, the latter sometimes so marked as to fill entirely the alveolar lumen, decrease or absence of colloid, increased inter-alveolar lymphoid tissue, etc.* Thus, our classification of thyrotoxic goiter will read as follows:

- (1) Thyrotoxic parenchymatous adenoma.
- (2) Thyrotoxic diffuse colloid adenoma.
- (3) Thyrotoxic nodular colloid adenoma.

#### DEVELOPMENT OF THYROTOXICOSIS

Thyrotoxicosis may develop in patients whose thyroid glands have previously been normal, or in ones previously affected with goiter, whatever sort it may be, colloid, cystic, or calcareous. In the first case we will deal with a thyrotoxic parenchymatous adenoma, in the second case, with a thyrotoxic colloid adenoma, diffuse or nodular as the case may be. Take, for instance, a young woman who never has had any sign of goiter, and who, after emotion, worry, overwork, or some acute infection develops a rapid heart action, palpitation, tremor, insomnia, exophthalmos, and who for the first time shows a diffuse enlargement of the thyroid, here, no one would hesitate in diagnosing this as a thyrotoxic parenchymatous adenoma. Take, on the other hand, another patient who has had for many years a non-toxic colloid adenoma. Suddenly or gradually, with or without any apparent cause

this patient becomes nervous, complains of palpitation, tremor, shows exophthalmos, and in short, exhibits a train of symptoms which are unmistakably thyrotoxic. This is a thyrotoxic colloid adenoma.

*One may think the distinction between these two forms of goiter devoid of interest. Therein lies the mistake, for the distinction between them is of great clinical and prognostic value. The thyrotoxic nodular colloid adenoma responds to surgical treatment far more readily and safely than the parenchymatous one.*

#### ETIOLOGY

What is thyrotoxicosis? I believe the answer to that question can be embodied in one word. Thyrotoxicosis is a thyro-neuro-polyglandular disease, namely, a pathological syndrome in which the thyroid, the nervous system, and the endocrine glands play their part.

The first part of our proposition, namely, that thyrotoxicosis is of thyrogenic origin is pretty generally accepted, not only by the surgeons, but by the majority of internists. The arguments in its favor, derived from the study of pathology, of experimentation, of opotherapy and especially of the surgical results, are so strong that we need not stop to discuss them. The thyroid not only assumes the predominating role, but it is also the organ almost always primarily affected.

But this is not all. Other conditions intervene, other factors play their part, too; such as the nervous system and the organs of internal secretion.

#### NERVOUS ORIGIN

Let us briefly discuss the relation of thyrotoxicosis to its nervous origin. As we know, there are some authors who consider the central nervous system as the cause of exophthalmic goiter and others who regard the disease as a neurosis similar to the one seen in hysteria and epilepsy; while some others believe that its origin is primarily due to a disturbance of the sympathetic system, and again some others to such of the vagal system. Then, too, others consider it only as a reflex due to some irritating influence taking its origin in the uterus, intestines, etc.

That the glands of internal secretion, in general, are directly influenced by the central nervous system is abundantly proved. For example, the puncture of the fourth ventricle causes diabetes, and the irritation of the sub-thalamic region causes an increased function of the adrenals, as shown by Ascher. The section of the restiform bodies according to Filehne and Warburton, causes hyperemia of the thyroid gland, exophthalmos, tachycardia, etc. In certain psychoses, in neuroses, in catatonia, as shown by Roenfeld, Kauffman and Paganini, the metabolism is greatly disturbed, the nitrogen excretion is greatly diminished, and the phosphorus and

calcareous elimination is greatly increased. The same is true in Graves' disease.

We must, therefore, realize that the nervous system plays a very important part in exophthalmic goiter. Whether this influence is primary or secondary, is, however, another matter.

To be sure, in Graves' disease the nervous system is unstable. There is a certain train of nervous symptoms such as emotionality, irritability, restlessness, instability, which forms an integral part of the clinical syndrome of that condition and which is just as typical of the disease as tachycardia, tremor, exophthalmos, etc. *These nervous symptoms are sometimes the dominant feature in the whole syndrome. But to consider them a priori and always as the primary cause of the disease seems to me, however, to be quite premature. We have nothing at hand to substantiate these conclusions; we have very much against it. Moreover, experiments show that the nervous symptoms follow administration of thyroid extract and do not precede it.*

Great stress is laid by the partisans of the nervous theory of Graves' disease upon the element of fear, psychic shock and fright, in order to prove the nervous origin of Basedow's disease. It is true there are cases of Basedow's disease whose incipency has been very sudden. In such cases there seems to be little doubt that the nervous system might be the primary cause of the trouble. These lightning forms, however, are rare. They nevertheless carry great evidential weight with them as they show that there exists an intimate relation between the thyroid and the nervous system.

There is another class of cases, where the starting point of the disease is referred to a psychic shock due to a runaway horse, an automobile accident, railroad wreck, etc. In these cases, however, thyrotoxicosis has become noticeable only weeks or months after the accident. For these cases the nervous origin of Graves' disease is more doubtful because the time elapsed from the accident to the development of the disease is quite long. It must not be forgotten that if one goes into the history of these cases carefully, one will usually find that, long before the accident occurred, there was a latent period during which a few symptoms of Basedow were already present. They may have been only barely sketched; that is enough. The nervous system of these patients had already lost its normal equilibrium, hence, the ease with which the shock of psychic order affected it. Indeed, one cannot but be impressed by the fact that often the psychic shock, to which the origin of the disease is ascribed, is truly insignificant; at any rate, would be insufficient to upset a normal nervous system.

Aside from a few exceptions it must be further positively proclaimed that in the great majority of cases of Graves' disease, psychic shock cannot be accused of being the causative factor, simply

because it is not present. Surely, no one is going to claim, for instance, that all the thyrotoxic nodular adenomata are of psychic origin; that a runaway accident, or a railroad wreck, is at the bottom of all thyrotoxic parenchymatous goiters, or that a scare by a burglar, a rape by a negro, is responsible for the cases of Graves' disease following acute infections, acute thyroiditis, and furthermore, that disappointed love must be looked for in all the cases of Graves' disease occurring at the time of puberty and menopause. In the majority of all these cases there is no apparent cause at all for the development of the disease. To claim these cases are primarily of nervous origin is simply to make a statement founded upon no proof.

In addition we may say that the nervous system plays a very important part in the production of thyrotoxicosis but that ordinarily its role is subservient to the one of the thyroid.

#### POLYGLANDULAR ORIGIN

This is the third member of our proposition. If one takes a bird's-eye view of the symptoms due to the disturbances of each one of the glands of internal secretion separately and compares them with one another, beside the typical and characteristic symptoms due to the pathology of the gland itself there is a train of secondary symptoms which occur in almost every disturbance of these organs. For example, suppose we deprive a young woman of her ovaries; beside amenorrhea and loss of sexual appetite we shall observe hot flashes, sweating, palpitation, moderate tachycardia, nausea, glycosuria, vomiting, nervousness, cutaneous eruptions, depressive states, and sometimes temporary insanity. And again, take Addison's disease, for instance; there, too, beside profound myasthenic symptoms characterized by an intense feeling of excessive fatigue, going sometimes into a state of complete adynamy, and beside melanodermy, there is a group of more general symptoms present, such as complete loss of appetite, vomiting, diarrhea, alternating sometimes with constipation, polyuria, and polydipsia, headache, loss of sleep, nervousness, states of depression, low blood pressure, flabby heart, irregularity of menstrual function, and sometimes complete amenorrhea. And so on. The same is true in a general way for the pathological conditions of the other organs of internal secretion.

*If we compare these clinical symptoms with the ones seen in Graves' disease, we are forced to admit that a number of those found in the latter condition seem to be common to the diseases of other organs of internal secretion, although in every instance the organ primarily involved is an entirely different one. This must mean, consequently, that there is between all these organs a functional interrelation. And so it is, as shown by the pathology and experimentation. No one organ is independent of the other organs. There*



*is no one organ driving the other organs exclusively, but rather do the organs drive each other reciprocally. Whenever one becomes pathologically involved, its derangement repercusses upon the function of the others. The functional solidarity of the thyroid, the ovaries, the adrenals, the thymus and possibly the pancreas is beyond doubt.*

Summing up, we are forced to admit that, although the thyroid gland plays the most important part in the production of Graves disease, we must nevertheless concede that other factors intervene at the same time, such as the nervous and the polyglandular systems. Hence, my conclusion: Thyrotoxicosis is a thyro-neuro-polyglandular disease.

#### THE MECHANISM OF THYROTOXICOSIS

Now what starts the whole thyro-neuro-polyglandular syndrome going?

We find first that the relation between infectious diseases and thyrotoxicosis is more than merely accidental. It is a relation of cause to effect. For instance, in thyroiditis, be it bacterial or toxic, we find hyperemia, cellular hyperplasia, increased absorption of the colloid, leukocyte infiltration, thyrotoxic symptoms. In iodine-Basedow where iodine seems to be the provocative agent, causing very likely a toxic thyroiditis, we find, too, hyperemia, cellular hyperplasia, diminution and thinning of the colloid, leukocyte infiltration, thyrotoxic symptoms. In acute infections of all sorts, as shown by careful post-mortems, the gland shows in a lesser degree, it is true, but nevertheless unmistakably the same pathological and clinical signs. Although the causes vary, the results are the same. In iodine-Basedow, as in toxic and bacterial thyroiditis, as in the ordinary Basedow, the nature of the histological changes and, to a certain extent, of the clinical symptoms, is the same. There is only a difference of degree. *We are consequently warranted in concluding that in thyrotoxicosis the mechanism of the development of the disease is similar to the one which occurs in iodine-Basedow and in thyroiditis, be it toxic or bacterial. The only difference is one of degree.*

*If we carry our line of reasoning a little further, as, in iodine-Basedow, in bacterial, toxic, or chemical thyroiditis, the true nature of the process is a toxic one, we shall naturally have to admit as a consequence of it, that in true Basedow disease, we have to deal with a similar toxic process, too. In the last analysis Graves' disease is a toxic thyroiditis.*

So understood, this theory will explain the pain to pressure, so often found in true thyrotoxic goiters; it will explain the adhesions so often found around the goiter at the time of operation, even when no external treatment, such as iodine or X-ray has been used; it will explain why in exophthalmic goiter the cervical lymph-

nodes are hyperplastic; why there is a leukocytic infiltration throughout the thyroid parenchyma; and it will explain, partly at least, the slight rise in temperature sometimes seen in Graves' disease.

*It is not necessary to look for a specific thyrotoxic microbe in order to explain all these clinical findings; they may be caused by all the microbes, their toxins, the products of autointoxication, or any toxic chemical agent. Under the spur of their irritation the thyroid works at top speed; it increases its blood supply and it undergoes hyperplasia.*

#### HYPERTHYROIDISM

This theory consequently leads us to consider the histological changes seen in a thyrotoxic thyroid as the result of hyperfunction. Hence, the theory of hyperthyroidism. *As a result of the increased function of the thyroid there is constantly in the blood an increased amount of thyroid secretion which, as we know, acts electively upon the central and vegetative nervous systems. Hence, the establishment of a vicious circle, as we have said before, the thyroid drives the nervous system and the nervous system drives the thyroid.*

This theory seems to me to answer most satisfactorily many questions. Thus, the protean origin of 'Graves' disease is no longer a puzzle; the remote causes of it are indeed numerous and diverse, such as infectious agents, disturbed polyglandular function, chemical agents, etc.; but the immediate cause is always the same, the hyperfunction of the thyroid. Thus, we shall understand better why Graves' disease is more prevalent at the times of puberty and menopause. Indeed, beside the disturbed nervous equilibrium, and possibly just because of it, beside the part which the organs of internal secretions play, toxic products due to the disturbed metabolism circulate in the blood and become injurious to the thyroid, hence, toxic thyroiditis and hyperfunction. Even in cases where the primary lesion lies in the nervous system, as in cases of shock, fright, etc., the theory still holds good. Indeed, in such cases it is reasonable to admit that beside a direct influence from the nervous system upon the thyroid, products of refuse due to a suddenly increased and disturbed metabolism as shown by sweating, diarrhea, vomiting, disturbed renal function, etc., which accompanies shock are driven into the circulation and may prove injurious to the thyroid and incite it to overfunction. At least these injurious stimuli may be sufficient to start a vicious circle between the thyroid and the nervous system; when once started there is no reason for stopping. *Both links, however, namely, the thyroid and the nervous system, are necessary for the production of the disease; let us not forget that the section of the restiform bodies causes exophthalmic goiter only as long as the thyroid is present; if it has*

been removed previously the syndrome does not take place.

#### CONCLUSION

The practical conclusions we shall draw from these few remarks are:

- (1) That we shall have to pay closer attention to focal infections.
- (2) That thyrotoxicosis is a medico-surgical

disease, namely, a disease where the internist and the surgeon must work hand in hand.

*It is as wrong for the surgeon to turn loose a thyroidectomized patient without further medical care, as it is wrong for the internist to let the safe surgical stage of the disease pass before referring the patient to the surgeon.*

151 E. BROAD STREET.

## Medical Problems in the Treatment of Graves' Disease\*

C. F. Hoover, M.D., Cleveland

**Editor's Note.**—As arterial murmurs are used in the differential diagnosis of Graves' disease, Dr. Hoover points out the necessity of identifying the sources of the various murmurs that are associated with goiter and other conditions confused with it. The carotid murmur, according to Dr. Hoover, does not outlast the systole of the heart, whereas the murmur in the thyroid arteries does and may persist during the entire cardiac cycle. A murmur within the bulbous venous will cease when the internal jugular vein is compressed at the angle of the jaw. Gravity is an essential factor in its production, but the murmur within a thyroid artery is unaffected by the position a patient may assume. Patients may be protected against degeneration of the gland by the exhibition of small doses of iodine or thyroiodine in the form of exsiccated thyroid. Thus far the superiority of X-ray treatment of the thyroid over conservative medical management, in Dr. Hoover's judgment, is so doubtful that an evaluation of its merits must be suspended. Physical and mental rest are the essentials of treatment. In some instances symptoms may arise from the goiter, and in such cases surgical removal is advisable, but thus far Dr. Hoover has been unable to see any justification for amputation of part of the thyroid gland as a direct treatment for Graves' disease.

**I**N expounding the medical treatment of Graves' disease, the first question to be answered is whether or not there is a rational basis for specific treatment. The etiology of this disease is wholly unknown. The suspected etiology rests entirely on fanciful speculation. No advocate for any kind of treatment has thus far proposed to combat the etiological factors, for the simple reason that the factors are unknown. Although in the early period of the disease there are many functional symptoms from the central nervous system, the alimentary tract, the heart and arteries, there is only one organ which reveals any evidences of structural change, and that is the thyroid gland. On account of this fact there has been a very diligent effort to fix the seat of origin within the thyroid gland. Thus far, however, there has been only one bit of meager evidence acquired for indicating the thyrogenic origin of the disease, and that has been the improvement due to radio-therapy of the thyroid. *Thus far, the superiority of X-ray treatment of the thyroid over conservative medical management is so doubtful that a critic must suspend judgment in the matter.*

A physician should keep in mind several facts in medical history which are very suggestive in this relation. There is not one successful specific treatment for any disease which has had to fight its way to acceptance by the medical profession. The evidence of merit in such cases has been so unequivocal and has received such prompt acceptance by high authority that the way to adoption has been freely open. Even valueless thera-

peutic measures in great numbers have received generous support from physicians. Whenever a meritorious remedy has met with resistance, it has come from the laity and not from the physician.

#### FUNCTION OF THE THYROID

What do we know of the function of the thyroid gland? We know there is a thyroid function essential to health, which is associated with the production of an organic secretion (containing iodine) within the colloid material of the gland. The want of this substance produces very characteristic symptoms, grouped under the name of myxoedema, which are so striking in their appearance and so magically recede under specific therapy, that a physician need see only one case to be convinced of the value of treatment. The pathology and treatment of hypothyroidism are established beyond all doubt. The proof of hypothyroidism has made the way easy for the acceptance of hyperthyroidism. Antitheses are grasped with avidity, and hyperthyroidism follows so obviously as a corollary from the proved existence of hypothyroidism that no further proof seems necessary. However, when we examine the evidences for hyperthyroidism, we find them very unsatisfactory. There is only the single bit of evidence above mentioned for its support. *Dysthyroidism, or perverted thyroid function, may be suspected if we assume there is some other essential function of the thyroid than the one associated with iodine-containing colloid. This may be true, but thus far the idea has not emerged beyond the realm of fancy.*

If we confine the discussion of thyroid function within its relation to iodine, how does the

\*Read before the Joint Session of the Medical and Surgical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 3, 1920.



matter stand? In the early stages of myxoedema, cretinism and Graves' disease, the histological findings in the gland are the same. It is impossible to interpret a clinical history from the histology of the gland. In all three instances there are the same proliferation and enlargement of the cells, disappearance of colloid material, and diminution in the iodine content of the gland. In all these cases there is hyperplasia of the gland with reversion to the colloid state following iodine therapy. With the reversion to the colloid state, myxoedematous and cretin patients improve; but Graves' disease patients may or may not improve, and they may improve when the evidence of hyperplasia of the gland remains unchanged. Furthermore, Graves' disease may persist or even increase in severity coincidentally with the appearance of symptoms we ascribe to hypothyroidism. How can hyperthyroidism exist in the presence of unmistakable hypothyroidism? If a goitrous mother gives birth to cretin children, we accept the hyperplasia of the gland of the child as a compensatory measure, but if the goitrous mother has Graves' disease, her children will be born with goiter. How can these facts be adjusted to the theory of hyperthyroidism?

#### CHALLENGING CASES

One of my patients, a woman of fifty years of age, developed the symptoms of Graves' disease and myxoedema at the same time, and it is not unusual to see Graves' disease develop as an old goiter diminishes in size. One man, sixty-five years of age, had Graves' disease for a year and then, after there had been great improvement, there suddenly developed all the severe toxic symptoms of this syndrome, which ended fatally in two weeks. In this case, as the severe symptoms began, the goiter, which was as large as an orange, entirely disappeared. Where the goiter had been, there was marked depression over the site of the lateral lobes and the isthmus. No trace of thyroid gland could be found on physical examination. This patient died from a very acute toxic Graves' disease with athyroidism. I can recall three such rapidly fatal cases of Graves' disease in persons who had carried a goiter for years and then lost all traces of goiter as the Graves' disease began.

Another evidence against the assumption of hyperthyroidism is found in the fact that patients who develop Graves' disease may have a thyroid gland with perfectly normal structure to histological examination. We have had this experience at Lakeside Hospital. A nurse, who had a well developed Graves' disease with loss in weight, cardiac enlargement and great muscular weakness and tremor, had a thyroid gland which was perceptible but scarcely large enough to be termed a goiter. Part of the gland was removed surgically, and on histological examination several men who were very competent to pass judg-

ment, agreed that the gland showed no evidence of hyperplasia.

Now, all the preceding statements are not theory and they are not doctrine, nor are they merely opinions; they are indisputable facts which every experienced clinician will confirm. If the disease is said to be thyrogenic and associated with hyperthyroidism, such doctrine rests on suspected phenomena and can receive no support from clinical and pathological facts.

#### THE DIAGNOSTIC VALUE OF MURMURS AND THRILLS

An audible murmur over an enlarged thyroid has been frequently interpreted as an evidence of hyperactivity on the part of the gland. The logic employed is: an increase in blood supply to the gland, therefore increased function. How does this prove out in practice? Myxoedema, sporadic cretinism and malignant growths in the gland have all shown palpable thrills and audible murmurs over the site of the thyroid arteries. So that, if the logic employed in Graves' disease in relation to enlargement of the thyroid arteries is tenable, it should be equally tenable in the case of myxoedema. There seems to be a prevailing impression that the murmur and thrill have their origin in the substance of the gland, and I have heard men discourse on murmurs within the blood sinuses of the gland. The murmurs originate at the source of the thyroid arteries, and are transmitted along the course of the arteries over the body of the thyroid gland. The mechanism of the production of these murmurs is quite the same as that giving rise to the murmur of dilated aorta. In dilatation of the lumen of the aorta beyond its origin, the eddies which a current with requisite velocity will produce in transition from a smaller to a larger lumen, are responsible for the audible murmur. So in the case of the superior thyroid and inferior thyroid artery, the lumen is enlarged immediately beyond the origin of the artery, from the carotid in one case and the subclavian in the other, and there is the same mechanism for the production of murmurs that is found in aortitis.

Much care must be exercised in identifying the source of an endovascular murmur in the vicinity of the thyroid gland. There are three sources for murmurs in this location: stenosis in the carotid artery from pressure on the artery by an enlarged thyroid; encroachment of the gland on the jugular vein at the bulbus venosus or in its immediate vicinity; and enlargement of the thyroid arteries. These are the three sources of murmurs in the vicinity of the thyroid which may occur in any case of Graves' disease with a goiter, and in every instance the examiner must carefully determine the role each source may play in the production of the audible murmur. I have seen great confusion arise from loud murmurs in this vicinity which were not caused by goiter, and were not in any way dependent on goiter, but were purely haemic murmurs at the

bulbus venosus due to severe anaemia. One case was a primary anaemia and the other was a secondary anaemia. Both patients had small colloid goiters with loud murmurs over the bulbus venosus. The anaemic source of the haemic murmur was not taken into consideration, and the murmur was interpreted by the physician as an evidence of hyperplasia of the thyroid gland. The fact that the patients were very weak and had some elevation in temperature, loss of weight, and a rapid heart rate, with globular enlargement of the heart, added to the confusion.

How can we identify the sources of these various murmurs? *The carotid murmur does not outlast the systole of the heart, but a murmur in the thyroid arteries will always outlast the systole and may persist during the entire cardiac cycle.* The reason for this is obvious, because the centrifugal current in the thyroid artery will be maintained, as in small arteries, not only during the cardiac phase but during the aortic phase of the pulse. *A murmur within the bulbus venosus will cease when the internal jugular vein is compressed at the angle of the jaw.* I have always, with a single exception found that this measure will arrest a murmur at the bulbus venosus. In the case of the exception referred to, the murmur at the bulbus persisted when the internal jugular vein was compressed, but when the patient assumed a horizontal position it entirely disappeared. *Gravity is an essential factor in the production of a murmur at the bulbus venosus, but the murmur within a thyroid artery is unaffected by the position a patient may assume.* Such a murmur will be just as loud when a patient is in the horizontal position as when he is erect.

There is no constancy in the relation between a murmur in the thyroid artery and the progress of a case of Graves' disease. The murmurs may entirely disappear and the patient's symptoms of Graves' disease show no improvement. On the other hand, the size of the thyroid artery and the palpable thrill and audible murmur may persist unaltered when all the other signs show a very marked improvement.

#### PROTECTIVE TREATMENT

If hyperplasia of the thyroid is very severe, the gland may fail to revert to the colloid state, and it is quite possible for necrosis of the glandular cells to follow. This is probably what happens in the mixed forms of Graves' disease and myxoedema, in which the patients develop unmistakable signs of hypothyroidism along with a Graves' disease which has lasted for several months or longer. *To protect the patients against degeneration of the gland, it is well to give them iodine in small dose, or the biological product, thyroidine, in the form of exsiccated thyroid. Patients with Graves' disease can take two grains of exsiccated thyroid a day, or two grains of iodide of potash daily, without having any increase in their oxygen consumption.* After

the employment of this iodine therapy, it is very common indeed to see a marked diminution in the size of the goiter and the disappearance of the murmur in the thyroid arteries. This may occur without improvement in the symptoms of Graves' disease, but it is an advisable measure to employ when hyperplasia is severe, because it is protective and preserves the integrity of the thyroid gland by causing a reversion from hyperplasia to the colloid state.

In three cases of Graves' disease which came under my observation, the patients had marked hyperplasia of the gland and large goiters when they entered the hospital. Thyroid tablets were given, and the patients promptly exhibited symptoms which might have been regarded as evidence of hyperthyroidism; the temperature rose, the heart rate increased, and tremor increased. The same dosage of thyroid, however, was continued, but the tablets were taken from another bottle from the same manufacturer, and all the untoward symptoms subsided. Apparently what happened in these cases was that the thyroid tablets originally given contained some ptomaine—a possibility always to have in mind in treating Graves' disease, for the symptoms of ptomaine poisoning may simulate increased intensity of this disease.

#### EFFECT OF GRAVES' DISEASE ON THE HEART

The thyroid gland may not undergo any histological change with the development of Graves' disease. The writer has seen many instances where there was either no enlargement of the thyroid gland, or there was very great reason for believing that the thyroid gland remained the same after the development of the disease as it was prior to the appearance of the symptoms. This is not true, however, in the case of the heart. *Graves' disease is invariably accompanied by globular enlargement of the heart. The minute volume-flow of blood is increased and all the chambers are enlarged to accommodate the increased output.* Graves' disease and some of the anaemias are the only instances in which there is an enlargement of the heart with an increased minute volume-flow of blood. In all other diseases accompanied by cardiac enlargement, the minute flow of blood remains the same or is diminished.

A very notable thing in Graves' disease is the want of two signs which are commonly present in cardiectasis: flattening of the subcardial portion of the diaphragm, and *choc en dome*. Thus far I have seen no instance of Graves' disease in which there was any modification of the symmetrical inspiratory excursion of the subcostal angle. The *choc en dome* is wanting simply because the apex impulse is not limited in its median aspect, for the right ventricle is enlarged quite as much as the left, and for this reason the apex impulse from the left ventricle merges into that of the right ventricle.

Enlargement of the thyroid gland is so preva-



lent in the large regions that in many instances physicians are tempted to link the thyroid enlargement with cardio-vascular and nervous symptoms which have no clinical association with the thyroid gland. Within the past few weeks I have seen one case of primary anaemia, one of severe secondary anaemia, and two cases of mitral stenosis, all of which were misinterpreted as Graves' disease on account of the presence of goiters.

There is another important point in the interpretation of cardiac enlargement due to Graves' disease. In the early period of the disease we never see any evidence of blood stasis, and patients may die with very rapid and enlarged hearts but with no evidence of stasis. *In the late forms, when hypothyroidism and myocardial and renal disease make their appearance, then evidences of stasis with cardiectasis are found; but so long as the patient presents an uncomplicated picture of Graves' disease, stasis from myocardial incompetence never appears.*

Does the cardiac enlargement of Graves' disease require any treatment? The heart does not require any stimulation, because the output is adequate; and the only rational indication for treatment would be the doubtful expedient of slowing the heart rate. The only treatment which would accomplish this purpose in the presence of Graves' disease would be toxic doses of digitalis, and such doses I have never employed. In an uncomplicated case of Graves' disease, there is no rational indication for direct treatment of the heart.

#### BASAL METABOLISM

It has long been known that in the early periods of Graves' disease the patients consume more oxygen per minute than a normal person. This is quite true, but there are very many other causes for an increase in the consumption of oxygen, and many of them may readily be confused with Graves' disease. One case of febrile anaemia that I recall had an increase of 60 per cent above the normal, and another had an increase of 30 per cent above the normal. *The diagnosis of Graves' disease should be made quite apart from studies in basal metabolism. If the diagnosis is once made, then the study of the patient's metabolism may be of some value in criticising his progress.* It will give some indication as to whether the patient is growing worse or improving. It is, however, by no means necessary, for the size of the heart and the heart-rate are far more dependable in estimating the progress of the disease than any guidance that basal metabolism may give. It is our practice at Lakeside Hospital to study the basal metabolism in all cases of Graves' disease and all suspected cases, but the measure is not really a diagnostic aid, and is not essential for guidance and criticism of the progress of the disease. Physicians in private practice who have no such laboratory faci-

ties available are just as well situated as are clinicians who have well organized laboratories at their disposal.

The writer does not wish to imply by this statement that the study of metabolism in Graves' disease has been of no value. It has been of very decided value in contributing to the study of the subject, but research and practice are very different, and I am sure the writer is justified in making the statement that the clinician who requires a study of basal metabolism to make a diagnosis of Graves' disease or who requires the basal metabolism for guidance in criticism of the progress of his patients, must find himself in a very weak position both for diagnosis and for treatment of the disease.

#### TREATMENT OF GRAVES' DISEASE

The etiology of the disease is unknown. We have very strong evidence to show it is not thyrogenic, and about all the positive knowledge we have on the subject indicates that hyperthyroidism is not associated with the disease. Should, however, the disease be thyrogenic in origin, it must be some form of dysthyroidism, but we have no direct evidence to indicate that dysthyroidism exists. Dysthyroidism up to the present moment is a mere fancy. As these patients are weak, and the ability for both mental and physical labor is very greatly reduced, the only clearly logical method of treatment is to give them rest. But what may be rest for one person is not rest for another. Confinement to bed may not amount to rest; it may be a mere annoyance. Confinement to bed may not mean rest to the patient any more than confinement in a straight jacket will amount to rest. If the patient is discontented and unhappy, and is unwilling to co-operate on such a basis, rest will not be attained by confinement to bed. I recall one patient with severe Graves' disease who grew decidedly worse after two weeks' confinement to bed. She was then allowed larger liberties and made a complete recovery. It may be necessary for many patients to abstain from active work over periods of one to five years, but the vast majority of them make good recoveries.

The use of the X-ray has received the approval of a number of writers within the past few years, but the results differ so little from those obtained by the observance of rest that the writer is disposed to look with much skepticism on the value of radiotherapy. It is a justifiable method of treatment and one which we employ, but thus far our experience has not been sufficiently reassuring to justify any announcement of decided success in the treatment of Graves' disease.

We must have a definite understanding of what we are treating in a case of Graves' disease. Are we treating the disease as an entity or are we treating a thyroid gland? The X-ray and iodine in various forms may be employed for the direct treatment of the thyroid gland, but it must not

be understood that this treatment is directed against Graves' disease as a clinical entity. The only medical treatment which has seemed of value is physical and mental rest. Such treatment allows very large interpretation on the part of the physician, and he who would treat such a patient with success must appeal to the reason of the patient; he must enlighten him on the char-

acter of the disease, and must be very artful in the employment of persuasion. In some instances symptoms may arise from the goiter, and in such cases surgical removal is advisable, but thus far I have been unable to see any justification for amputation of part of the thyroid gland as a direct treatment for Graves' disease.

700 ROSE BLDG.

## The Surgical Problems in the Management and Treatment of Exophthalmic Goiter\*

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Editor's Note.—In Dr. Crile's experience the main problems of the surgical treatment of exophthalmic goiter are the elimination of the excitants of metabolism before, during and after operation; the protection of internal respiration and maintenance of an adequate water equilibrium. In certain extreme cases in spite of every precaution there may be a period of intense post-operative stress marked by a greatly increased metabolism. On the principle that each degree of rising temperature increases the metabolism 10 per cent. Dr. Crile advocates the control of this increased metabolism by packing the patient in ice to reduce the temperature abruptly. By this means thyrotoxic storm may be controlled in a few hours and the patient goes on to an interrupted recovery. By following the anoci-association plan of handling goiter operations the mortality rate of 617 thyroidectomies in the Lakeside Clinic since February 21, 1919, through June 2, 1920, has been reduced to 1.13 per cent. and of this series 327 were for exophthalmic goiter with a mortality rate of 1.5 per cent.

THE surgical technique in operations for exophthalmic goiter, whether the gland be removed at one seance, or its activity checked by preliminary ligations, has been practically standardized. The problems of exophthalmic goiter, therefore, are related rather to management than to operative technique. The predominant characteristics of an advanced case of exophthalmic goiter are a mounting metabolism and a subnormal internal respiration. Every contact with the sensitized patient exaggerates these phenomena of the disease, and diminishes the resistance of the patient.

### THE MAIN PROBLEMS

The main problems of the surgical treatment of exophthalmic goiter are therefore:

- I. Elimination of the excitants of metabolism before, during and after operation.
- II. Protection of the internal respiration; and as the natural corollary of these—
- III. Maintenance of an adequate water equilibrium.

I. *Elimination of the Excitants of Metabolism.*—Metabolism is increased (a) by emotion, fear, worry, anxiety and grief; (b) by acute or chronic infection, as of the teeth, tonsils, and sinuses; (c) by physical pain; (d) by mental and physical work; (e) by protein diet and stimulants.

### NECESSITY OF AN ALL-INCLUSIVE PLAN OF TREATMENT

The mere enumeration of these factors is suf-

ficient to indicate their control—and practically all of these are controllable. It must be borne in mind that the advanced case of exophthalmic goiter is influenced by every environmental factor—internal as well as external, and that he presents a picture of an all-inclusive disintegration which is to be met by an equally all-inclusive plan of treatment which will include every controllable environmental factor from the first contact with the patient to the hospital, throughout the operative treatment, and after operation for a prolonged period of a planned hygienic and dietary regimen.

During the operation itself the increase of metabolism as a result of the physical trauma is controlled by local anesthesia in addition to the inhalation anesthesia, by careful dissection, by minimum handling. In certain extreme cases, in spite of every precaution, there may be a period of intense post-operative stress marked by a greatly increased metabolism. *On the principle that each degree of rise in temperature increases the metabolism 10 per cent., we control the increased metabolism by an abrupt reduction of the temperature by literally packing the patient in ice. The patient is covered by a rubber blanket and surrounded and covered by ice, while an electric fan still further promotes the rapid cooling. This treatment is remarkably successful. Within a few hours the temperature is reduced to near the normal, and the patient goes on to an uninterrupted convalescence.*

### CONTROL OF PATIENT AFTER OPERATION

Perhaps the hardest problem in the treatment of exophthalmic goiter is to secure a sufficiently prolonged control after the patient leaves the

\*Read before the Joint Session of the Medical and Surgical Sections of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 3, 1920.



hospital. In this respect the marked immediate relief experienced after the operation proves a dangerous factor, for the patient is encouraged thereby to believe that his cure is already accomplished. A post-operative period of a nursery regimen, which is prolonged in proportion to the severity of the disease, followed by gradually increasing activity, is as essential to ultimate cure as the operation itself.

## II. *Protection of the Internal Respiration.*—

In advanced cases of exophthalmic goiter the internal respiration is abnormally sensitive, as is indicated by the adrenalin test (Goetsch), and by the baneful effects of diminished exchange of air under the stress of emotional excitement or in the presence of physical injury. It is obvious therefore that in addition to the elimination of the factors listed in the above section, the internal respiration must be especially guarded throughout the operation, which should be graded according to the severity of the disease. In moderate cases the entire operation may be safely performed in one seance under light nitrous oxygen anesthesia; while in more severe cases, the operation should be performed in successive steps, varying from a single preliminary ligation to multiple steps in the extremely grave cases—ligation of one vessel, ligation of the second vessel, partial lobectomy, complete lobectomy, with an interval of a month or more between each two of these stages. In the worst risks, suboxidation from the inhalation anesthetic may be minimized by operating upon the patient in bed, under nitrous oxide analgesia and local anesthesia. If, even with these safeguards, the pulse during the operations runs up beyond the safety point, the operation may be stopped and the wound dressed with flavine gauze, which will hold the wound in *statu quo* for a day or two, until conditions are safe. In some cases, even though the gland has been resected it may be best to dress the unsutured wound with flavine and make a delayed closure the following day under analgesia.

## III. *Maintenance of Adequate Water Equilibrium.*—

In proportion to the increase in metabolism the consumption of water within the organism is increased. It becomes of vital importance to offset this by an increased intake of water. Water by mouth is urged, and in grave cases additional amounts—from 2,000 to 4,000 cc. are given by hypodermoclysis. In the latter case special precaution should be taken to minimize local discomfort by the use of local anesthesia before the needle is inserted. These patients do not tolerate well the administration of water by rectum.

By following this plan of management in the Lakeside clinic the mortality rate of 617 thyroidectomies from February 21, 1919, through June 2, 1920, has been reduced to 1.13 per cent; of this series 327 were for exophthalmic goiter with a mortality rate of 1.5 per cent.

OSBORN BLDG.

## DISCUSSION

DR. LEWELLYS F. BARKER (Baltimore).—A symposium on goiter is fitting to this time and place. In the state of Ohio, owing to its relations to a great goiter belt, you have unusual opportunities for the study of certain forms of disease of the thyroid gland. It has been pleasurable and most profitable to me personally to listen to the four papers in this symposium, for the men who have presented them—Drs. Marine, Crotti, Hoover and Crile—are recognized not only in the United States but all over the world, as eminent authorities in the domain under consideration. These men have shown us clearly the broad outlines of the subject and it remains for us who participate in the general discussion to give, regarding certain features, our impressions based upon personal experience.

First, let me say that, in my opinion, the clinical material seen by the surgeon differs markedly from that seen by the internist. The surgeon sees especially the outspoken cases of thyroid disease, whereas the internist sees not only these but all gradations from these down to the very mild mono-symptomatic cases. Probably the majority of thyroid patients who consult a surgeon directly have thyreopathies in which surgical intervention is indicated, whereas the internist sees, in addition, a large number of thyreopathies that neither he nor a surgeon would regard as cases needing operation.

The term Graves' disease or Basedow's syndrome has been variably applied. Some restrict its application to the classical cases in which in addition to (1) tachycardia, there is (2) an outspoken, diffuse, vascular struma; (3) a well marked fine tremor of the fingers; (4) a protrusion of the eyeballs (exophthalmos); (5) other eye signs (V. Graefe, Dalrymple, Rosenbach); (6) an accelerated rate of basal metabolism; and (7) an increased sensitiveness to epinephrin injections. Others include the less typical cases in which only a part of these signs are observable. In my own work, it is my custom to analyze all patients from the endocrine and autonomic points of view, and it has been matter of deep interest to me to find in how large a proportion of patients in general consultation practice one or more of the group of signs constituting the Graves' syndrome exist. It is these atypical cases, the so-called *formes frustes*, and especially the mono-symptomatic cases (with persistent tachycardia alone, or with fine tremor alone) that tax to the utmost the diagnostic powers of the clinician and demand the most careful consideration and discriminative judgment in order that a right decision as to therapy may be made.

Our ignorance regarding the precise pathogenesis of the Graves' syndrome has been sharply impressed upon us by the speakers of the symposium, and where ignorance exists it is far better to confess it, rather than to lull our curiosity and our wonder by blind acceptance of some hypothesis that still lacks adequate confirmation. It would not surprise me if we should find that a whole series of distinguishable conditions (thyroid, suprarenal, thymic, neural) may lead to a Graves' syndrome as a common end result.

In the medical treatment of the Graves' syndrome, especially of the milder cases, it is not uncommon to have at least temporary success, with physical and mental rest, with removal of local foci of infection, with general upbuilding measures, and with the administration of drugs (arsenic, quinine) that tend to slow the metabolic rate. Many patients under such measures make a good recovery. The thin patient gains weight, the tachycardia dies down and the subjective, nervous symptoms disappear. But every-

one knows that there are many cases in which success is not met with through the application of medical treatment alone; and when after a fair trial of such therapy, definite improvement does not set in, it is my custom to advise the patient to resort to surgery.

It seems to me important, too, that these patients should have the advantage of the surgical operation relatively early in the disease. The intoxication, whatever it is, that persists in the subjects of Graves' disease, in times does great harm to the heart-muscle, to the sex glands and to the nervous system. It is fair, neither to the patients nor to the surgeons to postpone operation too long in the cases that do not respond well to non-surgical therapy.

There is scarcely anything more magical in clinical experience, (unless it be the results seen in the pituitrin treatment of diabetes insipidus), than the quickly favorable results seen after strumectomy in exophthalmic goiter. Within 48 hours after the operation, the patients usually experience an amelioration of their symptoms that is unmistakable and most gratifying. In classical Graves' syndrome, and also in toxic adenoma of the thyroid, the surgeons now score remarkable successes. Even in advanced cases with severe myocardial disease (including a trial fibrillation), I have seen great benefit follow strumectomy.

In the atypical syndromes, however, and especially in the instances in which there is no palpable struma or only slightly thickening of the isthmus of the thyroid, surgery promises much less, and if operation be decided upon, the patients should understand beforehand that, in these types of thyroid disorder, not too much is to be expected from surgical intervention. It is in these atypical cases that excellent results are often obtained by internists who use the rest cure and the general upbuilding measures that I here referred to.

In conclusion, let me emphasize the desirability of the closest co-operation between internists and surgeons in the management of the thyroid diseases. The internist can be of great help to the surgeon in the operative cases, both before and after the operation; and the surgeon can bring help to the internist in many cases in which he would be powerless were he to confine himself to non-surgical therapy.

DR. W. D. HAINES, (Cincinnati).—I would like to call the attention of the Section to one very valuable method in dealing with the desperate cases which has been omitted in the discussion. Boiling water when injected into the gland substance will be followed by a rapid subsidence of the symptoms of hyperthyroidism.

In one instance only, in our experience, have we been forced to resort to this method; but prompt, permanent relief followed in a patient wherein one month had been spent in trying to get the patient in condition for operation. Rest in bed, X-ray, drugs, ice cap over the heart, and ligation of three of the vessels under local anesthesia failed to bring this patient to a physical condition which Dr. Herman, my anesthetist, considered safe for a general anaesthetic.

After infiltrating the skin over one lobe with a .05 per cent. of novocaine, a needle was introduced into the center of the lobe; the syringe was filled with boiling water, quickly attached to the needle and injected into the gland. More relief followed immediately after the injection of 60 cc. of boiling water than had been obtained in one month's previous care.

Complete relief from all the symptoms followed similar treatment in the opposite lobe one week later. This patient has fully recovered except for a badly damaged heart.

The exophthalmos, tachycardia, nervousness and jaundice subsided more promptly, as I remember, than these symptoms do following removal of the gland.

DR. DAVID MARINE (New York City).—The question of simple or endemic goiter has been mentioned in the discussion. In my opinion, there is no essential relation between this disease and exophthalmic goiter. I would like to take exception to Dr. Crotti's use of the term adenoma as adding further confusion to the time-worn discussion of pathological anatomy. Adenoma as now used in thyroid pathology, means a circumscribed more or less encapsulated glandular mass of highly variable morphology, rather than a uniform, functional hyperplasia involving the entire gland.

As regards the pathological anatomy of the thyroid in exophthalmic goiter, I have always considered it relatively important in helping us to get at the fundamental nature of the syndrome. I do not believe that the highly variable morphologic changes in the thyroid found in exophthalmic goiter can be used to support Dr. Barker's suggestion that possibly we are grouping several different diseases under the general subject of exophthalmic goiter. I likewise feel there is no sound basis for introducing such terms as toxic non-hyperplastic, toxic goiter or toxic adenoma, because the morphological changes are different from those usually seen in classic types of early uncomplicated exophthalmic goiter. My observations more nearly coincide with the classical descriptions given by Virchow some 60 years ago, that there is no constant type of change in the thyroid.

The same is true of the iodine store. While it is usual to find it reduced, all sorts of variations may be found. All that can be said with certainty is that the variations in iodine store are clearly associated and related to the morphological variations. I agree with Dr. Hoover, that in some cases the administration of iodine or thyroid does harm, while in others it is very beneficial. In other words, we have more facts regarding exophthalmic goiter than can be explained on the basis of morphological, chemical or functional alterations in the thyroid. We must look outside the thyroid. The pendulum is again swinging toward the polyglandular hypothesis. My own conception of the fundamental lesion in exophthalmic goiter is that of an exhaustion insufficiency of the adrenal system.

#### NEW AND NONOFFICIAL REMEDIES

During August the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: *Armour & Co.*, Corpus Luteum Tablets—Armour 5 grains; *Diarsenol Co.*, Sodium Diarsenol; Sodium Diarsenol 0.15 Gm. Ampules; Sodium Diarsenol 0.3 Gm. Ampules; Sodium Diarsenol 0.45 Gm. Ampules; Sodium Diarsenol 0.6 Gm. Ampules; Sodium Diarsenol 0.75 Gm. Ampules; Sodium Diarsenol 0.9 Gm. Ampules.

STERILE SOLUTION OF LUTEIN (H. W. D.).—Each cubic centimeter contains the water-soluble extract of 0.2 Gm. lutein-H. W. D., freed of protein in physiological solution of sodium chloride, for a discussion of the actions and uses of ovary preparations, seen New and Nonofficial Remedies, 1920, p. 201. The solution is supplied in the form of Ampules Sterile Solution of Lutien—H. W. D., containing 1 Cc. Hynson, Westcott & Dunning, Baltimore.



# The Treatment of Hyperthyroidism with Corpus Luteum: A Second Report\*

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**Editor's Note.**—The theory on which Dr. Hoppe bases his treatment of hyperthyroidism with corpus luteum, is that the condition is caused by a defective secretion of the interstitial sex glands; that the hormones of the interstitial sex glands have an inhibitory and regulatory action on the secretion of the thyroid; that when the function of these interstitial sex glands is deficient, there is a lack of physiological inhibition of the thyroid with an excessive secretion and therefore hyperthyroidism. In other words hyperthyroidism and hypoovarianism are synonymous conditions. The mere administration of corpus luteum, quinine hydrobromate and extract of belladonna will not relieve all cases. Many thyrotoxic patients require in addition careful dietetic, hygienic and symptomatic treatment. In stubborn cases, however, and in recurrences after operation the use of corpus luteum gives most satisfactory results.

**T**HE treatment of Graves' Disease is an ever interesting and important topic for discussion.

The fact that there is hardly a meeting of surgeons without a paper or even a symposium on the surgical treatment of Graves' Disease and the wide-spread discussion of the papers shows that the surgeons have not solved the problem, notwithstanding the vogue which the surgery of the thyroid enjoys at present.

The numerous methods of treatment on a purely hygienic and medical basis and the published results of treatment is also a proof that the results of treatment from a purely medical standpoint are far from being satisfactory. Both the surgical and medical methods of attack are defective for the reason that both approach the problem from a symptomatic standpoint.

## THE WEAKNESS OF SURGICAL AND DRUG TREATMENT

The weakness of the surgical approach is that its aim is to remove the thyroid gland which is not the primary seat of disturbance but merely an expression of disordered function, whose causative seat is located in some other portion of the body. This accounts for the fact that, while undoubtedly many cases are benefitted by surgical intervention and many distressing symptoms are relieved, many of the patients, months and years after the operation, still show most of the classical signs of the disease, notwithstanding the removal of the thyroid gland. The operation has merely made the patient's condition more tolerable.

The purely drug treatment inclusive of the treatment for intestinal auto-intoxication is not often successful because it is purely symptomatic. Whatever results are obtained are the results of nature's own recuperative powers, assisted by rest and other hygienic measures.

The ideal treatment should be based upon an effort to find and remove the cause of hyperthyroidism.

## THE CAUSE OF EXCESSIVE THYROID FUNCTION

It is generally conceded that hyperthyroidism is an expression of an unbalanced state of the chemical mechanism of the endocrine glands. The over-activity of the thyroid is never primary. It is unthinkable that, without any apparent cause, there should suddenly be present a state of excessive function of the thyroid. Hence our first approach toward a rational treatment of hyperthyroidism should be an endeavor to discover the cause; why the function of the thyroid, which previously has been normal should now be excessive.

The second indication of treatment is to overcome and remove the effects, on the body as a whole, of the over-activity of the thyroid gland.

The results of the over-activity of the thyroid manifest themselves gradually and progressively on nearly all the organs and functions of the body. A whole train of signs and symptoms which may be looked upon as a result of the presence in the circulation of an excessive amount of thyroid secretion, gradually develops, which is an expression of disordered metabolism and hence, of parenchymatous changes of the tissues of all the organs of the body. Many of the effects of this disordered function persist even after the thyroid has been removed. These changes, primarily the result of toxic action of thyroid over-activity, persist even after all possibility of thyroid action has been removed and hence demand special treatment, irrespective of the proximal cause. *The persistence of these symptoms is the best proof that, although they are originally caused by hyperthyroidism, the later condition is merely a secondary cause, the primary cause being some other remote organic or functional derangement of one of the other endocrine glands.* If this were not true such signs as exophthalmos, tachycardia, tremor, and excessive metabolism, should not persist years after the removal of the thyroid gland.

## GENERAL CONSIDERATIONS OF TREATMENT

We shall endeavor to place before you our experience in the treatment of hyperthyroidism extending over a period of five years and embrac-

\*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

ing about fifty cases. These embrace all degrees of hyperthyroidism from the mild to the most acute. None, however, were doubtful cases, the diagnosis in all being based upon the classical symptoms plus the presence of a distinct bruit in the thyroid gland. We believe that the good results in the treatment of these cases were due to the use of the extract of corpus luteum.

In treating this subject let us consider:

- I. The function of the thyroid gland.
- II. The relation of the thyroid to the other endocrine glands.
- III. The histology and the function of the corpus luteum.
- IV. The clinical results obtained in the treatment of hyperthyroidism with the corpus luteum and the theory on which the treatment is based.

#### THE FUNCTION OF THE THYROID

1. It seems to be fairly well established that the regulation of metabolism is one of the chief functions of the ductless glands and that the special function of the thyroid is the regulation of proteid metabolism. We see, therefore, an increase in basal metabolism in hyperthyroidism and a decrease in basal metabolism in hypothyroidism. Felta divides the ductless glands into two groups according to their physiological function, the acceleratory group and the retardative group. Through their hormones these glands exert an antagonistic effect on the metabolism of the body.

The thyroid gland, through its hormones, quickens metabolism and increases excitability. We see this typically in hyperthyroidism in which an excess of hormones is produced. In myxoedema we have an arrest of growth due to an inhibition of metabolism, because of a deficiency in production of the hormones of the thyroid.

#### RELATION TO OTHER ENDOCRINE GLANDS

2. Opposed to the acceleratory group of glands are those of the second group which have the opposite or retardative action. They build up and stimulate assimilation. In this group we have the interstitial glands, the testicles and the ovary.

We have, therefore, an antagonistic action between the thyroid gland and the sex glands and we will assume for the present, with an effort later on to offer proof, that the sex glands act as an inhibitory agency on the thyroid gland and that when there is an absence of the specific secrete of the interstitial, sex glands and the other ductless glands are unable to make the compensation, we will have an excessive function of the thyroid gland.

#### FUNCTION OF THE CORPUS LUTEUM

3. We know that the specific hormone of the testicle is produced by the interstitial tissue. For

the ovary, the proof of an interstitial secretory tissue has not been so well established. We shall try to offer proof that the specific hormone of the ovary is produced by the corpus luteum.

Fraenkel published a paper on the structure and origin of the corpus luteum, in 1903. Novak studied the relation of the corpus luteum to menstrual disorders and his research into its origin, structure and physiology is most critical and exhaustive. Other investigations have shown that the corpus luteum influences the development and function of the mammary gland and also that it affects the developments of secondary sex characters.

Let us consider somewhat in detail, what we know of the corpus luteum today. In a previous article we sought to establish the fact that the corpus luteum secretes the specific hormone of the ovary and is therefore a ductless gland. We know that the corpus luteum is the final stage of the development of the Gräafian follicle. Novak made a careful study of one hundred and thirty-seven ovaries which had been removed during operations on the pelvic organs and he concludes that the corpus luteum is epithelial in character and that it is derived from the epithelial cells of the membrana granulosa of the Gräffian follicles. Myer and Sobotta had previously come to the same conclusion as to the origin of the corpus luteum in lower animals.

The corpus luteum contains two kinds of specific cells—the lutein cells and the paralutein cells. These cells cover a very rich network of newly formed blood vessels. It is held, therefore, that these cells, the lutein and paralutein cells, being epithelial, have a secretory function, that they pour their secretion directly into the blood vessels upon which they are imbedded and that the corpus luteum is therefore a ductless organ.

The most important function of the corpus luteum is the regulation of the sexual life of woman. The hormone of the corpus luteum acts in a two-fold way:

(a.) A local action on the uterus and perhaps the placenta.

(b.) A general one—*viz.*, the regulation of the metabolism underlying the development of the secondary sexual characteristics, seen especially perhaps in the mammary glands.

In regard to the first function Novak says: "There can be but little doubt that the corpus luteum has at least a dual function, (a) the causation of menstruation; (b) the preparation of the endometrium and the fixation of the ovum in the earliest stages of pregnancy." Novak goes further and states that he has observed in ovaries in which the paralutein cells were present in large numbers in the corpora lutea, the patients suffered from profuse menstruation, irregular periods and sterility. He believes that the lutein cells stand in relation to menstruation and



that the paralutein cells have some relation to ovum fixation.

Seitz, Wintz and Fingerhut think that they have isolated the hormones of the corpus luteum and claim that it secretes two active principles which are opposite in their activity in relation to the functions of menstruation and pregnancy.

1. Luteolipoid which has an inhibitory influence on menstruation and when injected hypodermically diminishes the excessive flow in menorrhagia.

2. Lipanin, which in animal experiments, stimulates the development of the sexual organs and in human beings when administered hypodermically in amenorrhoea brings on the menstrual flow.

Hammond and Morhall have made observations on the relation between the corpus luteum and mammary glands and Pearl and Surface on the secondary sexual characteristics.

It seems demonstrated, therefore, that the corpus luteum has an all important influence, not only on menstruation and pregnancy, but also on the general metabolism of the body, in so far as the secondary sexual characteristics are concerned. There can be no doubt that other organs of internal secretion also have an influence on the regulation of the metabolism underlying secondary sexual characteristics and that these organs stand in relation to ovarian activity and that they are therefore in relation to the corpus luteum and that the latter organ is therefore the avenue through which the other ductless glands exert their influence on the functions of the female generative organs.

If these contentions of Novak, Meyer and Sobbatta, that the corpus luteum is an epithelial gland and that according to Novak its function is to regulate menstruation and ovum fixation, and if the observation of Seitz, Wintz, Fingerhut, Hammond, Marshall, Pearl and Surface on its relation to sex characteristics and mammary development are true, then there is at least some proof that there must be a specific secretion poured from the cells of the corpus luteum into the general circulation and that therefore, the corpus luteum is a ductless gland and secretes the specific hormone of the interstitial tissue of the ovary.

A defective development of the corpus luteum, therefore, would tend to produce a lack of balance of the endocrine system.

#### INTER-RELATION BETWEEN THE THYROID AND OVARY

We know that there is often a lack of proper development of the Gräffian follicle. In these cases the follicle does not reach maturity, it does not burst, but degenerates, undergoes liquifaction and disappears—the corpus luteum is not formed. If the corpus luteum is not formed the specific hormone of the ovary is lacking and the chain of ductless glands is unbalanced. What

proof have we to uphold Felta's contention that there is a relation and perhaps an antagonistic relation between the thyroid and the ovary?

We have seen above that Felta places the thyroid gland in the group of those glands whose hormones accelerate the metabolism of the body by increased oxidation and increased excitability of the tissues whereas he places the hormones secreted by the interstitial tissues of the sex organs in the antagonistic group—*viz.*, those whose function is to build up instead of breaking down, hormones whose function is anabolic instead of katabolic—assimilatory and retardative in function.

Our therapy is based upon the antagonistic action between thyroid and ovary or corpus luteum which we consider the specific endocrine gland of the ovary.

Clinically there is abundant proof of the interrelation of thyroid and sex life. In man the sexual function is an incident. In woman sexual function is the chief function of metabolism. We find, therefore, that disturbance of the thyroid activity in adults is found chiefly among women. Women are affected at least six times oftener than men and in my experience the proportion of women affected is still greater. In women, Graves' disease occurs almost always during the period of sexual life. It begins very often around puberty and its course, especially during acute exacerbations or in grave cases is attended with a suspension of the menstrual function. Graves' disease is rare before puberty and after the menopause.

#### INFLUENCE OF PREGNANCY

Many women with Graves' disease do not become pregnant. This would seem to prove that a normal ovum and a normal Gräffian follicle are not produced in these cases. We know that Graves' disease is subject to exacerbations and remissions. Pregnancy does occur and in some cases has a beneficial effect on the course of the disease. In others pregnancy has a decidedly bad effect. In apparently cured cases pregnancy can bring on an acute attack. This paradoxical effect of pregnancy on Graves' disease may be explained by the fact that when the corpus luteum of pregnancy is normally developed there is an improvement in the symptoms of the patient and when the corpus luteum is functionally deficient there is an exacerbation of the symptoms. We would like to explain the fact that some patients may go through one pregnancy without any difficulty and the next may cause very alarming manifestations of hyperthyroidism, on this basis of either a normal or deficient corpus luteum of pregnancy. On the same grounds we would like to explain the exacerbations and remissions ordinarily seen in Graves' disease when untreated, *viz.*, when the rupture of the Gräffian follicle is followed by the de-

velopment of a normal corpus luteum, the symptoms ameliorate and visa versa.

A further proof of the inter-relation of the corpus luteum and the thyroid is offered perhaps by mild cases of myxoedema which show a normal thyroid activity between menstrual periods and an active myxoedema during the menstrual function. This would seem to indicate that the corpus luteum exerted an inhibitory effect on the thyroid in these cases and that a thyroid gland, which was capable of performing its function fairly normally during the intermenstrual period, lost its ability to do so during the period of the greatest activity of the corpus luteum. (Hertoghe; Medical Record, 1914.)

Moreover, the same antagonistic action is seen in absolute Cretins who never arrive at the stage of puberty. In addition to these facts, our clinical experience would warrant our assertion that this inter-relation of thyroid and corpus luteum resolves itself into the fact that the specific hormones excreted by the corpus luteum exerts an inhibitory effect on the thyroid secretions and that hyperthyroidism is an expression of dysfunction of the corpus luteum in the female and perhaps, although we have not had much experience, of the interstitial glands of the testicle in the male. This view is also held by Claude and Gougerot who call Graves' disease a hypo-ovarial disease.

#### OBJECTION TO THE THEORY

The most serious objection to this theory is that we rarely see a typical Graves' disease symptom complex following the removal of ovaries or testicles. The vast majority of individuals, however, have a normal endocrine system. After a more or less prolonged period, when one gland is disturbed or diseased, it is possible for other glands to make the compensation. We know, for instance, that after castration in the human family as well as in animals, and during pregnancy for instance, there is marked increase in the size of the pituitary gland and that this enlargement means an increased function by means of which the endocrine balance is restored and maintained. Ovaries and testicles are removed only as a rule when they are diseased and when their function has been perverted for a long time and nature has had ample opportunity to establish a compensation before the operation. It is only perhaps in individuals in whom this balance cannot be established for some reason, that a dysfunction of the interstitial sex glands is followed by hyperthyroidism. In two cases at least the use of the anterior lobes of the pituitary gland was followed by relief in male cases of Graves' disease, and Renon and Delille saw a Graves' disease symptom complex disappear as the result of the simultaneous administration of pituitary and ovarian extract.

It is essential to prove, if the above theory is correct that the symptoms of Graves' disease are

due to an excessive secretion based upon an excessive function of the gland rather than to a toxic secretion and that the manifestations of Graves' disease are due to increased thyroid activity.

#### THYROTOXICOSIS OR HYPER-ACTIVITY?

There have always been two theories on which the development of the symptoms of Graves' disease have been based, viz., the *toxic theory* and *theory of excessive secretion*. The toxic theory is based upon the assumption of a perverted function of the thyroid gland. This theory is probably on the wane, the results obtained from surgery would seem to lead to this conclusion and the almost universal adoption of the terms hyperthyroidism and hypothyroidism would seem to indicate that the abnormal activities of the thyroid gland are due to either an excessive or a deficient secretion of the thyroid tissue. According to Felta we do not need to assume a perverted function of the thyroid, in Graves' disease, that poisoning and excessive secretion are synonymous terms. A normal secretion poured into the circulation in excess will poison the body. Felta calls our attention to adrenalin poisoning as a fitting example.

The symptom complex of Graves' disease, especially the serious cases, undoubtedly points to pluriglandular disturbance. But we need not assume that we have therefore a pluriglandular disease, for we cannot have a marked hyperfunction of any one of the endocrine glands without disturbing the function of most, if not of all of them. The theory on which the use of corpus luteum is based is that Graves' disease and hyperthyroidism are equivalent terms.

#### THE CORPUS LUTEUM TREATMENT OF HYPER-THYROIDISM

4. I have been using the corpus luteum now for six years. I was impelled to try it at first on a very acute case of Graves' disease because of the presence of amenorrhoea which had persisted for a year. This patient had had prolonged rest and the usual medicinal remedies, but went from bad to worse. She had lost sixty pounds in weight. This patient made a complete recovery and has remained well for the past five years. Since my last report in 1918, I have treated twenty-five additional cases and have had most of the cases reported previously, under observation and have seen them from time to time. None of these fifty cases were doubtful cases. In making the clinical diagnosis of hyperthyroidism, I have established for myself the rule that, if there is no bruit in the thyroid gland, I do not make the positive diagnosis of hyperthyroidism and place the cases in a doubtful category. All of the above cases were diagnosed as positive cases on the above test. One of the cases reported in 1917, has died of influenza, all the others are doing well and some



of them seem to have established a normal balance of the endocrine glands and do not take corpus luteum. The others are comfortable when they take corpus luteum.

I have had no cases of hyperthyroidism operated on since 1917. In the last group of twenty-five cases one man died twenty-four hours after I had seen him in consultation. The patient had had hyperthyroidism for years—was in an acute relapse at the time of the consultation and was suffering from and died of acute myocardial disease leading to cardiac dilatation. Three or four of these cases were very acute—one had lost sixty pounds and the other seventy pounds—both of these latter cases have made practically a complete physiological recovery and have taken up their former occupations. Both were women. Both had extreme cardio-vascular symptoms, exophthalmos, diarrhoea and rapid emaciation. One, the wife of a physician, has made a perfect recovery; the other has still some exophthalmos, and an enlarged thyroid, but insists that she is well and has worked in a factory for the past year. This second group contains a surgical case which had the thyroid removed, but still presented all the objective signs and subjective distress of hyperthyroidism. She has improved under the treatment. Three of the other cases are very much improved, all of them are satisfied and relieved. In the latter group of cases there is but one male and he has done well on extract of pituitary gland.

#### DETAILS OF TREATMENT

The most notable and the most rapid improvement is seen on part of the cardio-vascular symptoms and general nervous manifestations. The pulse rate drops quickly, the general subjective symptoms caused by the circulatory disturbances subside, the loss of weight stops, digestion and appetite become normal, the nutrition improves and the patient takes on weight.

While I look upon the corpus luteum as the specific agent in the treatment of Graves' disease, I have not discontinued the symptomatic treatment, nor the attention to hygiene and diet. For after Graves' disease has been established, we see signs of pluriglandular disturbance. The digestive disturbances, the increased metabolism and the rapid emaciation all demand symptomatic treatment. On account of the general nervous and mental irritability, cases of Graves' disease are not very easily managed, nor are they as a rule faithful to the treatment. I give careful attention to the diet, allow very little physical exercise and prescribe much bed rest. Quinine hydrobromate and extract of belladonna are of great value. I usually give two grains of corpus extract, three grains of hydrobromate of quinine and one-tenth grain of the extract of belladonna after each meal. After the cases show improvement, I diminish the dose to two per day and even when the patients are apparently

well, I still give one dose per day, usually at bedtime. As in my previous report, I still find that patients who take the treatment irregularly or who discontinue the treatment show a tendency to relapse and to have an exacerbation of all symptoms. We believe that the exacerbations and remissions which are ordinarily seen in Graves' disease are due to the fact that defective ovaries may occasionally produce even several months in succession normal corpus luteum, and during these periods show an improvement. We believe that in the cases which have recovered, the use of the corpus luteum has tided the patient over and assisted the patient in establishing a compensatory secretion by one of the other endocrine glands and thereby bringing about once more an endocrine balance with a permanent relief of all the symptoms.

#### CONCLUSION

The theory on which the above treatment is based, therefore, is that hyperthyroidism is caused by a defective secretion of the interstitial sex glands; that the hormones of the interstitial sex glands have an inhibitory and regulatory action on the secretion of the thyroid; that when the function of these interstitial glands is deficient, there is a lack of physiological inhibition of the thyroid, with an excessive secretion and therefore, hyperthyroidism. In other words, hyperthyroidism and hypo-ovarianism are synonymous conditions.

As I have said before the mere administration of corpus luteum alone will not relieve these cases. Even a superficial knowledge of Graves' disease would disabuse our minds of this idea. The cases require careful dietetic, hygienic and symptomatic treatment. But whereas my previous experience has been that most cases with the above symptomatic treatment combined with quinine hydrobromate and extract of belladonna showed but indifferent results, the use of corpus luteum, in conjunction with this general treatment, gave most satisfactory results.

The treatment of hyperthyroidism with corpus luteum is comparable with the treatment of myxoedema with thyroid extract. As long as we administer thyroid extract, cases of myxoedema and hyperthyroidism do very well. But the administration of thyroid extract will not make a defective thyroid resume a normal function. Nor will the administration of corpus luteum cause a deficient ovary to produce a mature Gräffian follicle. But it has been my experience that, as long as we administer corpus luteum in Graves' disease or in its period of exacerbation, the patient is improved and can be kept in a fairly normal condition.

19 W. SEVENTH ST.

# A Preliminary Report on a New Method for the Clinical Diagnosis of the Toxic Thyroid States: With a Note on the Serological Technique\*

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**Editor's Note.**—Neither the basal metabolism nor the adrenalin test for toxic thyroid states has proven entirely adequate or exact in the experience of Dr. Berkeley, hence his present efforts to establish a more scientifically exact method for the diagnosis of plus and minus states of hyperthyroidism. The method of diagnosis is based on the serology of complement fixation. Aside from the value of the new test Dr. Berkeley believes that his experimental work throws considerable light on the etiology of cellular tumors in general and also suggests that spontaneous recovery in exophthalmic goiter is due directly to the formation of corrective anti-bodies in the patient's own system. It is to be hoped that these researches will add considerable of value to present methods of handling the goiter problem.

**A** SCIENTIFICALLY exact method for the diagnosis of plus, minus, and toxic thyroid states would be a great boon to clinical medicine. And the problem is not insoluble; but the solutions so far suggested are inadequate.

## INADEQUACY OF THE METABOLIC AND ADRENALIN TESTS

E. C. Kendall<sup>1</sup> among others has proposed the basal metabolism as a guide to the existence of hypo- and hyperthyroid conditions. But apart from the expense and complicated procedure of this method is the objection that no one yet knows how many other clinical conditions may temporarily influence the basal metabolism in both plus and minus directions.

E. Goetsch<sup>2</sup> has suggested the severity of the patient's reaction to a measured hypodermic dose of adrenalin as a measure of his thyroid activity. I cannot learn that this test has proved generally popular or generally confirmatory of evident clinical signs. M. S. Woodbury<sup>3</sup> in a study of some fifty recent cases of thyroid disease at Clifton Springs, N. Y., concludes that the adrenalin test is an indicator of "general sympathetic hypersensitiveness" which may or may not be of thyroid origin.

## EXPERIMENTS WITH COMPLEMENT FIXATION

It was my idea at one time that if the thyroid secretion appears in the blood in protein form, it might be picked up by a complement fixation test and titrated. In order to try out this supposition the following experiment was repeated a number of times: A healthy young sheep was immunized by successive injections of a saline suspension of thyroids from freshly killed dogs. Using the injection as antigen, a pronounced and abundant antibody could be demonstrated in the sheep serum in the course of a few injections. But not the slightest binding could ever be observed with normal dog serum as antigen. This seems to prove either that the thyroid secretion is not present in the serum at all in protein form, or that, if so, it is in too minute amount to be available for a fixation test. As I have not found any

mention in the literature of such an experiment as this, it seems worth while to record it even in its present fragmentary form.

Failing in this attempt my attention was turned to the possibility that when the chemistry of the thyroid gland is materially disturbed, as in exophthalmic goiter, the thyroid toxins (assuming for the time that such bodies exist) might be accessible to study by the same (complement fixation) method.

There is almost no literature on this subject that I have been able to find, except some pioneer work done almost ten years ago by Prof. Marinnesco, and his associate, A. Papazolu<sup>4</sup>. The latter of these observers claims to have found antibodies a number of times in the serum of patients suffering from Basedow's disease. He used as antigen aqueous, alcoholic, and ethereal extracts of Basedow goiters, parenchymatous goiters, and normal thyroids. Of his 38 tests 14 showed complete fixation, 12 almost complete fixation, and 12 were negative.

This work, while interesting and suggestive, dates back to the very early days of scientific serology, and seems not to have been very carefully controlled. Moreover Papazolu used alcoholic and ethereal as well as aqueous extracts of his thyroid antigens, thereby of course getting fixation with many luetic subjects.

Using non-lipoidal antigens (for method of preparation and serological technique see below) derived from various thyroid tumors (about ten in all) it has been impossible to get fixation with the serum of Graves' disease except in the case of a single goiter kindly given us by Dr. John Rogers. This growth Dr. Rogers thought to be a true Graves' tumor. Unfortunately it was all extracted, nothing being left for microscopic examination. Antigens from four normal human thyroids gotten at autopsy under favorable conditions entirely failed to bind.

About this time through a fortunate combination of circumstances Mr. Koopman observed that with *normal dog thyroid* random samples of Basedow serum would bind powerfully, and that they would not bind with any other dog organ.

\*Courtesy of the Medical Record, June 19, 1920.



## RESULTS WITH DOG THYROID ANTIGEN

Starting out with this test as a guide—*i. e.*, using dog thyroid as antigen—fixation experiments have been done on more than 175 human serums, of which 40 were under suspicion of positive thyroid dyscrasia.

Of the 40, 18 were clinically undoubted Graves' disease, 2 were probably so, 10 were doubtful, and 10 were probably *not* Graves'. I have full notes of most of these cases; in all the instances where the blood only was sent (through the courtesy of medical friends kindly interested in the research), the diagnosis was made by a colleague in whom I had unusual confidence. I believe the chances of error in this regard are reasonably remote.

The 18 Graves' cases were all one plus to four plus. The probable cases were positive; six of the ten doubtful cases were positive; the ten "probably not" were all negative.

As to the controls, numbering over 135 patients, all were negative except one. This exception was a young married woman of about thirty years, with a tertiary specific skin lesion on one knee. She was not particularly nervous; her pulse was 96; her eyes and thyroid did not strike one as pathologically prominent. She had a positive Wassermann and a positive thyroid fixation. She was lost before it was possible to make any further investigation of her history and condition. All the other controls—representing nearly all the chronic, and many of the common acute diseases (non-infectious)—were, as already noted, negative. About 20 were old fibrocystic goiters. Serum kindly sent us by Dr. George Draper from a borderland case was, he reported, negative to the Goetsch test; we found it two plus positive to the dog thyroid test. Another serum (Dr. Jos. H. Fobes) was positive to the Goetsch test, and also two plus with dog thyroid.

## DISCUSSION

The new test has been repeated hundreds of times and has been checked up with all needful controls. If anyone alleges that the binding is due merely to the chance appearance in human serum now and then on a native amboceptor, then he must also explain why in more than ninety-five per cent. of the cases the native amboceptor appeared in patients with a positive thyroid dyscrasia.

Speaking further for the value of the test is the fact that in several of the positive cases which have improved very much or apparently gotten well in the last eighteen months, the test has varied concomitantly with the clinical improvement, falling from four plus to two plus, and later disappearing entirely. Dr. H. H. Janeway, of the New York Memorial Hospital, who has recently experimented extensively with radium in these cases, tells me that he considers the test of distinct value in the quantitative adjustment of such treatment to the clinical condition of the patient.

## TENTATIVE EVALUATION OF THE TEST

The number of cases so far observed is too small to make the suggestion more than tentative, but with this reservation I venture to hope that the new test may be found of value in several directions:

1. In the clinical diagnosis of a great many cases which are now very perplexing—early cases, late cases, borderland cases, anomalous cardiac neuroses, and thyroid tumors without definite signs of thyroid poisoning, such as unusual menstrual swellings, post-puberty enlargements, and fibrocystic goiters in the early stages. Such a test would help to differentiate exophthalmos due to other causes than Graves' disease, and would eliminate many cases of severe tobacco poisoning due to cigarettes, where the symptoms and signs (as recently noted in army soldiers and recruits) have been such as to deceive the very elect.

2. The test would aid in the adjustment of therapeutic measures to the immediate condition of the patient.

3. And finally it might throw considerable light upon the etiology of cellular tumors in general.

Subject to later modification the view may be suggested that spontaneous recovery in exophthalmic goiter is due directly to the formation of these corrective antibodies in the patient's own system; and that rest, careful feeding, and relief from anxiety contribute to the cure merely by aiding the patient's normal immunity-mechanism.

In explanation of so curious and unexpected a phenomenon I have no reasoned hypothesis. It may, however, be tentatively suggested, that dog thyroid contains a substance, or group of substances, native in the dog, but toxic in man. For such a supposition there are numerous analogies elsewhere in biochemical physiology. For this substance I offer the name *cynothyrotoxin* (of evident derivation), and I presume it to be formed in the human thyroid under the abnormal chemical conditions which appear when exophthalmic goiter develops. It is probably not the only toxin involved (as indicated above in the case of Dr. Rogers' specimen), but is of special importance, and is often present when plus thyroid states are abnormally excited.

## SEROLOGICAL TECHNIQUE\*

*This reaction* is apparently due to a specific thyroid substance which combines with an antibody in the blood of the patient.

*The degree of specificity* of the reaction depends of course upon the amount of thyroid antigenic substance in the antigen used. The antigen is an extract of the thyroid of normal dogs. It is best to use the mixed glands of five or six dogs. As at present prepared, the extract contains much extraneous matter which takes no part in the reaction; if some method of securing the antigenic substance free from all foreign

matter could be devised, the specificity would be enhanced. As far as we have gone, we know that the antigen slowly deteriorates even when kept under the best conditions and after about three weeks it is necessary to obtain a new supply. Drying instantly spoils its antigenic properties and it does not withstand heating to 50° C. for 15 minutes.

*The best method of preparing it* which we have been able to find is as follows: The glands are obtained under aseptic precautions as soon as possible after the dogs have been killed. Each gland is trimmed carefully, and minced finely with sterile scissors. The whole mass is then ground in a mortar with a measured quantity of washed and sterilized sand and of dry sodium chloride. The amount of sand is of no importance, but the salt should be added in the proportion of one-tenth gram to each gram of gland used, and a few drops of 2 per cent. aqueous solution of tricesol are added for each ten grams of thyroid. This mixture is corked tightly and laid away in the ice-box. For use it is made up with distilled water, using 10 c.c. of water to one gram of the original amount of gland. The sand and solid matter are removed with the aid of a centrifuge.

*The test* is set up in form of a titration, using constant amounts of serum in not more than one-quarter of the least amount which is anticomplementary. The antigen is used in varied amounts, beginning with an excess and ending with the least amount which can be expected to give fixation. The exact amounts used will depend upon the total volume of the test the worker is accustomed to using. At the same time an antigen control is made with the same quantities of antigen as are put in the test. This procedure will obviate the necessity of putting in a separate titration of the antigen before the test itself is made. The result is indicated by the difference between the quantity of antigen which is anticomplementary of itself, and the quantity which binds complement in the presence of serum. A negative serum with the antigen will often bind less complement than the antigen alone. A positive serum will bind with one-half the least anticomplementary dose of antigen. Fixation is carried out for from four to six hours in the ice-box. At the present time the range is short, but with improved methods of preparing the antigen it is hoped the range will become greater.

Besides the tests on human glands and human tumors (*i. e.*, thyroid tumors), as above mentioned, we have not tried the glands of any other animals except bullock and pig. These were negative. It is quite possible that some may be found which will produce better results than dog thyroids.

Much more work also remains to be done on fixation results with extracts of true exophthalmic goiters. These are now very hard to get in New York operating rooms, as surgical removal

of them has gone out of fashion; and when gotten we have not been able to devise any way of keeping them in fit condition for antigen formation for more than two or three weeks.

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\* By John Koopman, B.S. The earlier part of this work was done in part at the Loomis Laboratory of Cornell Medical College. The assistance of the college authorities is hereby formally acknowledged.

134 EAST SIXTY-SECOND STREET.

#### Book Review

*Exophthalmic Goiter and Its Non-Surgical Treatment*, by Israel Bram, M. D., Instructor in Clinical Medicine, Jefferson Medical College; Visiting Physician Philadelphia General Hospital; Member of the Society for the Study of Internal Secretions, etc. C. V. Mosby Co., Publishers, St. Louis. Cloth, \$5.50.

In offering his volume to the general practitioner, Bram hopes to stimulate a keener interest in the disease in question than has heretofore been evinced by the profession; to convince physicians that exophthalmic goiter does not belong in the realm of surgery; and to persuade them eagerly to attempt an early diagnosis and institute the proper non-surgical treatment with a will to win.

Bram has not tried to supply a comprehensive work on the advances made in thyroid experimentation, nor does he launch forth any new views concerning the mechanism of the chain of ductless glands of which the thyroid plays a leading role. The important facts of endocrinology bearing a practical relationship to Graves' disease, as well as the salient points concerned in the successful therapeutics of this disease, are particularly stressed upon.

While the anatomy and physiology of the thyroid are adequately dealt with and the pathology and pathogenesis of exophthalmic goiter are discussed in detail and at length, the chapters devoted to the symptomatology, differential diagnosis, course and prognosis and especially the non-surgical treatment are those that will hold the attention of the specialist and the general practitioner.

Every phase of treatment is elaborated on and a complete method of routinely handling individual cases is developed. Bram shows great skill and discretion in his advice about selective therapy, and such adjuncts as rest, hygiene and diet.

In conclusion Bram points out why exophthalmic goiter is not a surgical disorder; dwells on the fallacy of surgical premises and procedures; reminds his readers of the many surgical complications and pseudo-cures and unhesitatingly reiterates that exophthalmic goiter is permanently curable by non-surgical treatment.



# Goiter Survey Work in Ohio: The Incidence of Simple Goiter in the School Children of Cleveland, Akron and Warren\*

David Marine, M. D., New York City, and O. P. Kimball, M. D., Warren.

**Editor's Note.**—In the July issue of *The Journal* the survey work of Drs. McCord and Walker of Cincinnati on the incidence of endemic goiter and its prevention in school children was published with a view to interesting the profession at large in this public health activity. The present survey of goiter incidence in the school children of Cleveland, Akron and Warren, is herewith added to the papers of the Goiter Symposium to show just how important and necessary the work of goiter prevention is. Ultimately it is expected that further surveys will enable the Public Health Service to handle the problem involved effectively. A comparison of the incidence of thyroid enlargements in relation to sex shows that in the groups of school children examined by Drs. Marine and Kimball it is a little more than twice as frequent in girls. The investigators conclude, however, that the general statement that sex makes no difference in the incidence of thyroid enlargements before puberty and that during and after puberty it becomes five or six times more frequent in girls does not conflict with their figures. The explanation for the apparent variance is that the majority of the pupils examined were below the age of puberty.

**T**HE Great Lakes basin, including the St. Lawrence river valley, is the most important district of endemic or simple goiter in North America. Barton<sup>1</sup> in 1800, wrote an excellent monograph on the occurrence of goiter among the American Indians living along the southern shore of Lakes Ontario and Erie. Osler<sup>2</sup> has emphasized its frequency in the Province of Ontario; Adami<sup>3</sup> in the St. Lawrence valley; Dock<sup>4</sup> in Michigan, and many other observers including ourselves have published papers on endemic goiter in man and animals living in the states bordering on the Great Lakes.

As compared with the severe endemic goiter regions of the world, *e. g.*, the Alpine districts of France, Italy, Switzerland and Austria or the Himalaya region of northern India, the Great Lakes basin would be classed as a mild endemic goiter district. This is shown by the great rarity of cretinism, which, as Morel<sup>5</sup> first emphasized, is the end stage of severe goiter, (*i. e.*, thyroid insufficiency).

## OBJECTS OF THE PRESENT SURVEY

*While the frequency of simple goiter in man in*

\*From the Department of Experimental Medicine, Western Reserve University. Aided by a grant from the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association.

*northern Ohio is generally known, its actual incidence in any locality or unit of population is entirely unknown, except for the papers by ourselves on the incidence in school girls of Akron. Our object in publishing the following data, therefore, is first to encourage the extension of this survey work so that ultimately a map showing the actual incidence may be prepared as part of the Public Health Record and secondly, since simple goiter is so easily prevented, such a survey would be necessary in order to determine where goiter prevention as a public health measure is most needed.*

## DATA OF THE SURVEY

The data of the survey are given in the following tables. In Cleveland only the pupils of three schools from different sections of the city were examined. In Warren and Akron, the pupils of all schools were examined. The examinations in Warren and Cleveland include boys and girls, while in Akron only girls were examined. No pupils below the fifth grade were examined. Fifth grade pupils average 10 to 11 years of age and the great increase in the incidence of thyroid enlargement in this climate begins about the age of 13 to 14 years or in the seventh to eighth grades.

TABLE I.  
Summary of Age Incidence of Pupils.

Schools	Total Cases	10—12 Years		12—14 Years		14—16 Years		16—18 Years		18—20 Years	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
						GIRLS.					
Cleveland	406	164	40.39	172	42.37	65	16.01	5	1.23	0	0.00
Akron	7907	2680	33.89	2529	31.99	1947	24.62	649	8.21	102	1.29
Warren	925	210	22.70	267	28.87	275	29.73	153	16.54	20	2.16
						BOYS.					
Cleveland	273	84	30.77	132	48.35	56	20.51	1	0.37	0	0.00
Warren	911	191	20.97	314	34.47	250	27.44	131	14.38	25	2.74

TABLE II.  
Relation of Age to Number of Pupils with Normal Thyroids.

Schools	Total Cases	10—12 Years		12—14 Years		14—16 Years		16—18 Years		18—20 Years	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
						GIRLS.					
Cleveland	254	117	46.06	102	40.16	34	13.39	1	0.39	0	0.00
Akron	4157	1764	42.43	1235	29.71	873	21.00	248	5.97	37	0.89
Warren	699	187	26.75	208	29.76	203	29.04	89	12.73	12	1.72
						BOYS.					
Cleveland	223	69	30.94	112	50.22	41	18.39	1	0.45	0	0.00
Warren	824	176	21.36	283	34.35	222	26.94	119	14.44	24	2.91

TABLE III.  
Relation of Age to Number of Pupils with Slightly Enlarged Thyroids.

Schools	Total Cases	10—12 Years		12—14 Years		14—16 Years		16—18 Years		18—20 Years	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
						GIRLS.					
Cleveland	132	46	34.85	57	43.18	25	18.94	4	3.03	0	0.00
Akron	3269	876	26.80	1195	36.56	816	24.96	327	10.00	55	1.68
Warren	199	19	9.55	55	26.74	63	31.66	54	27.13	8	4.02
						BOYS.					
Cleveland	42	8	19.05	20	47.62	14	33.33	0	0.00	0	0.00
Warren	84	15	17.86	30	35.71	27	32.14	11	13.10	1	1.19

TABLE IV.  
Relation of Age to Number of Pupils with Moderately Enlarged Thyroids.

Schools	Total Cases	10—12 Years		12—14 Years		14—16 Years		16—18 Years		18—20 Years	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
						GIRLS.					
Cleveland	20	1	5.00	13	65.00	6	30.00	0	0.00	0	0.00
Akron	373	40	10.73	98	26.27	153	41.02	72	19.30	10	2.68
Warren	26	4	15.38	4	15.38	9	34.62	9	34.62	0	0.00
						BOYS.					
Cleveland	8	7	87.50	0	0.00	1	12.50	0	0.00	0	0.00
Warren	3	0	0.00	1	33.34	1	33.33	1	33.33	0	0.00

TABLE I, shows the number of pupils examined and the groups according to age and sex. Each of the five age groups includes two years. This gives the range of the ages included in the particular fraction of the population of each community dealt with.

The distribution of pupils with normal thyroids, with slightly enlarged thyroids, with mod-

erately enlarged thyroids, and with markedly enlarged thyroids in relation to age is shown in TABLES II, III, IV, and V. The all important factor in such grouping is the definition or standard of the normal thyroid clinically. The other groups—slightly enlarged, moderately enlarged and markedly enlarged are purely arbitrary and relative divisions. Such a grouping is exposed



TABLE V.  
Relation of Age to Number of Pupils with Markedly Enlarged Thyroids.

Schools	Total Cases	10—12 Years		12—14 Years		14—16 Years		16—18 Years		18—20 Years	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
						GIRLS.					
Cleveland	0	0	0.00	0	0.00	0	0.00	0	00.0	0	0.00
Akron	8	0	0.00	1	12.50	5	62.50	2	25.00	0	0.00
Warren	1	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00

TABLE VI.  
Summary of Goiter Survey Records.

Schools	Total Cases Examined	Normal		Slightly Enlarged		Moderately Enlarged		Markedly Enlarged		Adenomas	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
						GIRLS.					
Cleveland	406	253	62.31	133	32.76	20	4.93	0	0.00	7	1.72
Akron	9679	4971	51.36	4209	43.49	487	5.03	12	0.12	46	0.48
Warren	925	699	75.57	199	21.51	26	2.81	1	0.11	4	0.43
						BOYS.					
Cleveland	273	223	81.68	49	17.95	1	0.37	0	0.00	0	0.00
Warren	911	824	90.45	84	9.22	3	0.33	0	0.00	1	0.11

to the error of the personal bias of the observer and this cannot be eliminated even with the elaborate systems of thyroid measurements suggested from time to time. The plan we have used is relative and if the standard of normal remains constant and the same observer makes all examinations the relative importance of the data is not impaired.

#### STANDARDS OF NORMAL AND ENLARGED THYROIDS

Our standard for the normal adult thyroid is that the weight does not exceed 25 grams. Most text books of anatomy and many individual observers quote higher weights for normal. Clinically no part of the outline of a normal thyroid can be detected on inspection. The lateral lobes cannot be palpated. The normal isthmus can be felt as a very thin band across the trachea in all individuals except the very stout and those in whom it lies on a level with or behind the upper border of the manubrium. In such cases it may be felt by having the pupil swallow while the observer holds the thumb against the trachea. This portion of the gland is very superficial and slight enlargements are often visible as a transverse ridge before the enlargement of the lateral lobes is palpable or visible. As the thyroid usually undergoes uniform enlargement the condition of the isthmal or palpable portion is a safe index and standard for the detection of the slight enlargements which because they are so common

are usually not considered as enlarged by local physicians.

TABLE VI, is a summary giving the total *normal*, *slightly enlarged*, *moderately enlarged*, and *markedly enlarged* thyroids for the three communities. Adenomas are also included. The percentages shown in this table for Cleveland are misleading because the number and age range of pupils examined is inadequate. No pupils above the 8th grade were examined in the three Cleveland schools, while in Akron and Warren all pupils from the 5th to the 12th grades were examined. The number and age range for both Akron and Warren are adequate and give a fair picture of the percentage relations of normals, slightly enlarged, moderately enlarged and markedly enlarged thyroids.

#### SUMMARY

In the three communities of Akron, Cleveland, and Warren, Ohio, the percentage relations of school children with normal and enlarged thyroids were found to be as follows: (1) *Girls*: 9679 (examinations extending through 3 years) were examined in Akron—51.36 per cent. had normal thyroids and 48.64 per cent had enlarged thyroids; 406 were examined in Cleveland—62.31 per cent. had normal thyroids and 37.69 per cent. had enlarged thyroids; 925 were examined in Warren—75.57 per cent. had normal thyroids and 24.43 per cent had enlarged thyroids. (2)

*Boys:* 273 were examined in Cleveland—81.68 per cent had normal thyroids and 18.32 per cent had enlarged thyroids; 911 were examined in Warren—90.45 per cent. had normal thyroids 9.55 per cent. had enlarged thyroids. *A comparison of the incidence of thyroid enlargement in relation to sex shows that in the groups of school children we have examined it is a little more than twice as frequent in girls.* The general statements that sex makes no difference in the incidence of thyroid enlargements before puberty and that during and after puberty it becomes five or six times more frequent in girls do not

conflict with our figures. The explanation for the apparent variance is that the majority of the pupils examined were below the age of puberty.

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MONTEFIORE HOME AND HOSPITAL.

## OHIO PUBLIC HEALTH NOTES

Under a new redistricting system now in effect in Springfield the city public nursing service is materially strengthened. A nurse is on duty in each of the six districts, with headquarters at the fire engine houses, where they will keep their supplies and receive calls. The district nurses have the function of the visiting nurse under the old plan, but their duties are limited to the district to which they are assigned.

—Dr. Robert Lockhart, former director of the trachoma bureau of the Division of Communicable Diseases, State Department of Health, has been appointed health commissioner for Cuyahoga County, outside of Cleveland and its suburbs, and assumed his duties October 1. Dr. Charles Koenig, formerly of Cleveland, has been appointed to a similar position in Lucas County.

—The institution of a juvenile clinic and mental tests to determine the mental age and educational capacity of Akron school children is being considered by local school officials. The tests employed would be similar to the psychology tests used in the Army during the war and would be of advantage to pupils in placing them in classes in which they could advance in a measure commensurate with their mental capacity.

—Mr. A. H. Burnett, former executive secretary of the Ohio Public Health Council, Cincinnati, died in Rochester, Minnesota, recently. Mr. Burnett left Ohio a year ago to become professor of community organization at the University of North Carolina, and served during the past summer as field worker and lecturer for the American Red Cross.

—Receipts for the Chillicothe Municipal public health fund in 1919 were \$7,213.02 and expenditures from the fund amounted to \$7,618.22, according to the report on city finances filed recently. Announcement has been made that Chillicothe will be the site of a public health center

to be established by the Red Cross under the supervision of Dr. J. R. McDowell of Cleveland. The new center will be in charge of Health Commissioner G. E. Robbins and two nurses.

—A campaign for the purpose of impressing upon large Cleveland industrial concerns the importance of employing industrial nurses in their plants, is being carried on by the Industrial Nurses Club of that city, having a membership of 100 nurses.

—The appointment of Dr. William K. Murray of Chicago as chief medical officer of the Canton health department, became effective October 1. Dr. Murray's duties will be confined largely to the control of contagious diseases and the supervision of quarantine regulations.

—The sanitary and hygienic condition of Cincinnati school buildings will be rated regularly during the coming school year by Dr. Oscar M. Craven, chief medical director of the Cincinnati schools. Each building will be scored according to its average sanitary condition and the reports will be submitted to the board of education from time to time. Dr. Craven believes the system will prove an incentive for those in charge of schools to "keep on their toes" in safeguarding the health of children.

—Crawford County health board has authorized the establishment of a movable baby clinic, which will probably be given its initiation in Crestline. Miss Frances Taylor of Boston has taken up her work as public health nurse for the city of Bucyrus.

—Federal prohibition agents are cooperating with City Chemist Knapp of Cleveland in a campaign against certain types of patent medicines. Over 80 samples were collected for analysis on one day recently. If samples are found misbranded further shipments are confiscated.

—The first monthly health bulletin of the Springfield and Clark County health department made its appearance in August. The bulletin, published under the direction of Health Commissioner Richison contains health data of all kinds and a resume of the work of the department together with information obtained by it.



## Subject of Pediatrics Studied at Group Meetings Arranged by the Committee on Medical Education

Post-graduate group meetings held in September under the auspices of the Committee on Medical Education of the Association were well attended and augur success for the 1920 series to be held in various parts of the state for the benefit of members of the Association. The first two meetings of the series were held at Athens on September 7 and Chillicothe on September 9.

At each of these gatherings Dr. Henry John Gerstenberger of Cleveland, professor of pediatrics at Western Reserve Medical School, medical director of the Cleveland Babies' Dispensary and visiting pediatricist to Lakeside Hospital, spoke on "Pediatrics," the timely subject selected by the Committee on Medical Education for study in this year's meetings.

Attendants at the Athens and Chillicothe sessions were enthusiastic in their praise of the comprehensive lecture and the pleasing and genial manner in which Dr. Gerstenberger presented it. The sessions began in the late afternoon, recessed for a dinner party and reconvened for resumption of the lecture in the evening, and at the close the audience crowded around the speaker, reluctant to end the discussion. Some of those present in Athens made the trip to Chillicothe two days later in order that they might hear the lecture a second time.

The lecture, as presented by Dr. Gerstenberger, is a resume of the newest developments in the field of pediatrics, of value to the general practitioner from the standpoint of prevention, diagnosis and treatment. It is divided into two main parts including (a) fundamental considerations in pediatrics, and (b) newer developments in pediatrics of practical importance to the family physician. An outline of the lecture was printed in the September issue of *The Journal* and the complete text will be published at the conclusion of the series of meetings.

Other meetings were addressed by Dr. Gerstenberger at Canton on September 21; Dayton on September 24; Marion on September 29, and Zanesville on September 30, and another is scheduled for Gallipolis on October 7. At Dayton Dr. Gerstenberger's lecture was part of the annual Second District chautauqua program, while the session at Zanesville was the occasion of the annual meeting of the Eighth District and the meeting at Gallipolis will constitute the annual Ninth District convention.

Arrangements for the Athens meeting were in charge of a committee of the Athens County Medical Society consisting of Drs. H. M. Taylor, W. T. Sprague and A. L. Pritchard, and to them belongs a large share of credit for the success of the meeting.

Being the event of the annual Tenth District meeting, the Chillicothe meeting was held under

the direction of Dr. R. W. Holmes of Chillicothe, president, and Dr. James A. Beer of Columbus, secretary, and a committee of the Ross County Medical Society including Drs. Loy Hoyt, John Franklin and H. E. Harmon. At the business session which preceded the scientific program Dr. John B. May of New Holland was elected president for the ensuing year and Dr. Beer as secretary, a position he assumed last May, when Dr. Sylvester J. Goodman of Columbus, the former incumbent, became councilor of the Tenth District. Circleville was chosen as the site of the 1921 meeting.

Following are the registration lists for the Athens and Chillicothe meetings. These lists are believed to be fairly complete but it is possible that some who arrived late failed to register and their names, therefore, are not recorded.

### ATHENS, SEPTEMBER 7

*Athens County*—W. N. Alderman, J. H. Berry, D. H. Biddle, C. C. Butt, S. E. Butt, T. A. Cope-land, A. J. Crawford, V. G. Danford, C. B. Har- per, J. L. Henry, J. M. Higgins, C. C. Hill, E. L. Hooper, C. E. Howe, H. T. Lee, E. LeFever, C. S. McDougall, F. P. McVey, J. T. Mervin, S. E. G. Pettigo, A. L. Pritchard, W. S. Rhodes, J. R. Sprague, W. T. Sprague, Raymond Stutz, H. M. Taylor, J. E. Voigt, C. Von Scheele, J. F. Weber.

*Perry County*—E. I. Dozer, J. G. McDougall, J. P. Wortman.

*Washington County*—J. W. Donaldson, F. S. McGee, A. G. Sturgiss, C. A. S. Williams.

*Parkersburg, West Virginia*—S. W. Bush, H. M. Campbell, C. T. Fisher, Wade Gaston, G. D. Jeffers, R. B. Miller, M. R. Stone, S. D. H. Wise.

### CHILLICOTHE, SEPTEMBER 9

*Athens County*—J. M. Higgins.

*Delaware County*—C. A. Day.

*Fayette County*—L. M. McFadden, D. H. Rowe, A. S. Stemler, Howard Stitt.

*Franklin County*—D. R. Alban, L. D. Atkin- son, H. G. Beatty, L. L. Bigelow, Isabel A. Brad- ley, Wayne Brehm, C. I. Britt, J. W. Brobst, R. A. Brown, E. E. Carlton, J. S. Carlton, George Cooperider, Ernest F. Cox, C. H. Creed, C. D. Dennis, W. D. Deuschle, M. T. Dixon, W. E. Duffee, Elsie Ehrtan, E. J. Emerick, Thomas Evans, M. D. Fitch, S. J. Goodman, J. L. Gor- don, Emilie C. Gorrell, I. B. Harris, R. R. Harris, E. M. Hatton, W. C. Heintz, N. C. Hochwalt, E. G. Horton, L. P. Howell, Austin Hutt, W. D. Ing- lis, I. Jordon, George W. Keil, S. N. Lovsled, E. C. Ludwig, J. J. McCloud, A. B. McConagha, C. W. McGavran, Natalie Merrill, L. W. Neiswen- der, W. T. Palchanis, H. M. Platter, Joseph Price, W. H. Pritchard, R. A. Ramsey, John Rausch- kolb, J. W. Reason, J. M. Rector, M. S. Reynolds,

C. C. Ross, Andrews Rogers, Ernest Scott, P. D. Shriner, G. H. Snyder, McKendree Smith, C. L. Spohr, R. B. Taylor, Wells Teachnor, Andrew Timberman, Gertrude H. Transeau, C. M. Valentine, W. J. Weaver, M. Grace Welch, C. H. Wells, H. O. Whitaker, H. Whitehead, W. F. Whitten, A. H. Wyker.

*Green County*—A. F. Haas, R. H. Grube.

*Jackson County*—R. W. Caldwell, J. D. Hunter, J. J. McClung.

*Morrow County*—R. L. Pierce.

*Pickaway County*—G. H. Colville, D. V. Court-right, H. D. Jackson, Howard Jones, A. F. Kaler, G. G. Leist, D. H. Marcy, J. B. May, C. G. Stewart.

*Pike County*—O. C. Andre, F. C. Metzger, I. P. Seiler, L. E. Wills.

*Portage County*—R. D. Worden.

*Ross County*—R. E. Bower, W. L. Counts, A. H. Dunn, John Franklin, L. T. Franklin, H. E. Harman, C. C. Hatfield, E. Hemmeger, G. W. Holdren, R. W. Holmes, L. E. Hoyt, O. L. Iden, W. D. Jones, C. D. Leggett, F. T. Marr, A. E. Merkle, G. S. Mytinger, Glen Nisley, D. A. Perrin, Josephine Riley, E. C. Robbins, G. E. Robbins, W. B. Smith, L. M. Tinker.

*Scioto County*—S. S. Halderman, Gilbert Mick-lethwaite, A. R. Moore, Tunis Nunemaker, Harry Rapp, O. D. Tatje.

*Shelby County*—Arlington Ailes.

*Union County*—H. C. Duke, F. M. Wurtsbaugh.

*Wagoner, Oklahoma*—Charles Martin.

### North-Western Association in Tiffin, October 26-27

North-Western Ohio District Medical Association, comprising the Third and Fourth Councilor District of the State Association, will hold its seventy-fifth annual meeting, October 26 and 27, in the Masonic Temple at Tiffin. A splendid program has been arranged and should bring out a record attendance.

The first day's session will start at ten o'clock with divine invocation by Rev. Smith of Tiffin and an introductory address by Dr. John G. Keller of Toledo, Councilor of the Fourth District. Next will come the organization and business meeting, after which the following scientific program will be rendered:

1. "Intracranial Complications of Otitic Origin"—by Louis R. Effler, M. D., Toledo. Discussion opened by W. O. Bonser, M. D., and Albert Steinfeld, M. D., Toledo.

2. "Infant Feeding"—by F. V. Boyle, M. D., Bowling Green. Discussion opened by C. D. McCoy, M. D., Kenton, and Dana Weeks, M. D., Marion.

3. "Contracted Foot"—by A. N. Wiseley, M. D., Lima. Discussion opened by A. E. Jones, M. D., Wetsel, and W. S. Neville, M. D., Lima.

AFTERNOON SESSION, 1:00 P. M.

4. "Some State Problems of Medical Interest"—

by Charles Lukens, M. D., Toledo, President of the Ohio State Medical Association.

5. "Cardiovascular Lues"—Clinical Features illustrated by lantern slides, Charles W. McGavran, M. D., Columbus; Pathology, with demonstration of specimens, Ernest Scott, M. D., Columbus.

6. "Endocrin—Gonad Dysfunction, from the Gynecologist's Viewpoint"—by Charles W. Moots, M. D., Toledo. Discussion opened by N. Worth Brown, M. D., Toledo, and Carl Sawyer, M. D., Marion.

7. "Enlargement of Prostrate"—by Malcolm and Robert Pratt, M. D., Bellefontaine. Discussion opened by Charles Moots, M. D., Toledo, and T. R. Thomas, M. D., Lima.

4:00 P. M.

8. "Goiter"—W. D. Haines, M. D., Cincinnati.

6:00 P. M.

Banquet at Masonic Temple.

8:00 P. M.

9. "Peripheral Nerve Injuries and Their Treatment"—by Dean Lewis, M. D., Chicago, assisted by Lewis J. Pollock, M. D., Chicago.

WEDNESDAY, 8:00 A. M.

10. "Some of the Problems of Appendicitis"—by T. F. Heatley, M. D., Toledo. Discussion opened by E. W. Doherty, M. D., Toledo, and Charles Harrison, M. D., Napoleon.

11. "Ileus"—by E. A. Baker, M. D., Clyde. Discussion opened by E. M. Ickes, M. D., Fremont, and H. R. Dewey, M. D., Bellevue.

12. "The Present Status of Functional Test for Heart Efficiency"—by L. A. Levison, M. D., Toledo. Discussion opened by Ralph Daniels, M. D., and N. Worth Brown, M. D., Toledo.

13. "Nerve Injuries"—by J. R. Tillotson, M. D., Delphos. Discussion opened by R. R. Hendershott, M. D., Tiffin, and I. N. Zeis, M. D., Carey.

14. "Pulsus Irregularis Perpetuus"—by N. Worth Brown, M. D., Toledo. Discussion opened by L. A. Levison, M. D., Toledo.

Officers of the North-Western Association are: Dr. A. S. McKitrick, Kenton, president; Drs. F. L. Bates, Lima, and I. N. Zeis, Carey, first and second vice-president, respectively; Dr. W. C. Pay, Bellefontaine, secretary, and Dr. R. J. Morgan, Van Wert, assistant secretary and treasurer. Drs. R. R. Hendershott, Tiffin, and John G. Keller, Toledo, are the district councilors.

*Silver Salvarsan*—According to a report of the Medical Research Committee of Great Britain, silver salvarsan is apparently a Molecular combination of arsphenamine and silver in some form. The substance is on trial, and its promiscuous use at this time would be ill advised. In the United States no license for the sale of silver salvarsan has been granted by the Treasury Department and hence it may not be sold in interstate commerce (*Jour. A. M. A.*, Aug. 28, 1920, p. 626).



## Compulsory State Health Insurance Side Lights and Developments

Those who through preference assume that compulsory state health insurance is a "dead issue" because none of the three groups most interested—industry, labor and the medical profession—have endorsed it, may be due for an unpleasant jolt in the coming months.

Propaganda on behalf of the scheme has been gradually extended and developed by the American Association for Labor Legislation and its subsidiaries.

In spite of the fact that some of the most prominent national labor leaders have voiced opposition to the scheme, many local labor unions and some state federations have gone on record in favor of it. \* \* \*

The following news dispatch carried extensively in newspapers throughout the country is an example of recent activities and propaganda:

"A campaign for the passage of a workmen's health insurance bill has been launched by the Maine State Federation of Labor, following two resolutions unanimously adopted at its recent annual convention at Waterville, calling for the universal health insurance plan and instructing the legislative committee to work for its adoption.

"Sickness, which each year affects one-fifth of the adult workers, is the most prolific source of poverty," declares the federation's resolution. "Even the fear of sickness and its disastrous effects undermines the well-being of the workers. The workers, through the trade unions and fraternal organizations, have made heroic efforts to meet this crying need of the wage earners. In these sick benefit plans, the workers bear the entire expense, although industry is in part responsible for the sickness among workers."

"The universal plan is endorsed by the federation because compulsory health insurance will 'bring sickness protection to all workers' and will 'place upon industry its just share of the cost of such insurance.'

"The federation insists that the workmen's health insurance law furnish sickness protection at actual cost, with all private profits by stock insurance companies absolutely prohibited.

"The federation insists that the workmen's health insurance law furnish sickness protection at actual cost, with all private profits by stock insurance companies absolutely prohibited.

"Such a measure," the resolution says, "should embrace medical care and cash benefits during illness, and funeral benefit; should provide for active participation of the workers in the management and for democratic administration, and should exclude all interference by the commercial insurance interests."

"A second resolution refers to the benefits of the state workmen's compensation law 'to safeguard the wage-earners from the results of industrial accidents,' and urges the adoption of 'health insurance laws which have been proven by experience to be an efficient means of protecting wage-earners from sickness.'

"With this advanced action a total of more than 21 state federations of labor and 30 national labor organizations are now on record in favor of workmen's health insurance legislation." \* \* \*

The movement, apparently well financed, is

being fostered through various mediums by prominent welfare and social service workers. As an example of the propaganda tending to develop and "color" the ideas of those interested in social welfare, the following article written by Edward T. Devine, a member of the general administrative council of the American Association for Labor Legislation, on the subject of "Doctors and Health Insurance" appeared in a recent issue of *The Survey*:

"That part of the medical profession which is hostile to health insurance is very badly served by some of its spokesmen. If they are to be accepted as representative of present day physicians it would seem as if the falling off among them might be compared to that which Hamlet noticed between his mother's husbands. The former King his own father, it will be remembered, was a pretty good king as kings went in Denmark in those days.

"Physicians are proverbially gentlemen. They are public spirited. They are the first servants of humanity, responsible to their conscience and amenable to the high ethics of their profession. They are law-abiding and respecting. They do not work for filthy lucre, but for the satisfaction of preserving life and safeguarding health. They are the very salt of the earth.

"But in the new counterfeit presentment which their self-appointed artists have drawn for us, they are none of these things. They have gone into politics, not to secure pure milk, better housing conditions, or an efficient health department, as it is their noble tradition to have done so often; but to defeat excellent members of the legislature for having voted for health insurance. They are after power, not in order to serve, but in order to protect their pocket books. Like Britons, they never, never will be slaves.

"If the state enacts laws providing for the distribution of the costs of sickness—although this is an economic and not a medical question at all—they will refuse to practice medicine. They do not have to care for the sick—no sir! they will go into business or practicing law. Better still, they will go into politics now and defeat every candidate even of their own party who has anything whatever to do with extending the insurance principle to sickness.

"They don't believe in workmen compensation either. They were fooled that time, but never again! What does it matter to this degenerate type of physician that sickness is the chief cause of poverty? What does it matter that industry is creating a sickness disability every day, for which it does not provide financially? Not workmen but business men and investors are the better paying clients. Therefore let us become the tools of exploiting employers; and try to persuade workingmen that they are better off in a chaotic, anarchistic, individualistic practice of medicine than in one which is organized, socialized and modernized. Let us insinuate that these pestiferous intermeddlers have a sinister motive. They are probably chiropractors or osteopaths in disguise. At any rate there is a 'nigger in the wood pile' somewhere. They may mean well but probably not; probably they are crooks—these paid agents of the quartet lettered conspiracy. If there is any meeting which is favorably impressed by the arguments in favor

of health insurance it is because the meeting is packed—even if this reflects on reputable citizens.

"This is not our caricature. It is that which the medical profession are allowing physicians presumably in good standing not a thousand miles from New York Academy of Medicine to draw of present day physicians.

"It is time for plain speech. Are the doctors concerned about the present unsatisfactory conditions or not? Are they concerned that thousands of the sick poor do not get the care which they should have; that the majority of patients get attention later in the course of their disease than is desirable for effective treatment; that a very large number cannot for lack of means carry out the treatment which the doctor prescribes or would prescribe if he thought it were of any use; that it is a matter of accident whether a patient falls into competent hands or not; that nursing is wholly inadequate; that hospital and sanatorium care is not available for a very large proportion of those who need them? If doctors are concerned about these things, are they content that their own charitable service shall save their conscience rather than some comprehensive plan of dealing with the cost of medical, surgical, maternity and nursing care shall be devised and put into operation? If physicians object to compulsory insurance, are they ready for state medicine as an alternative.

"What concerns us is to know whether doctors conceive that the obstructive, dog-in-the-manger, pettifogging tactics by which health insurance is now opposed in their name will add to the esteem in which the medical profession is held or that it is compatible with their dignity and traditions.

"When the New York Court of Appeals in the Ivins case made an absurd decision which was immediately over-ruled in the only way possible—by a constitutional amendment—a blow was inflicted on public confidence in the courts from which they have not yet recovered. By such an unfortunate incident—unfortunate from the point of view of those who desire public confidence in the courts—was the inauguration of workmen's compensation heralded.

"It will be unfortunate again if by stupid, narrow, selfish, and unworthy leadership, the medical profession, instead of guiding and leading the next step in social insurance, puts itself on record as indifferent to the costs of sickness in our modern industrial communities and supremely concerned about fees, the attainment of financial privilege and an autocratic independence as the treasured goal of successful medical practice.

"There are ample grounds for differences of opinion about any particular plan of health insurance. This ebullition of gratuitous advice has nothing to do with such honest differences of opinion on their merits."

\* \* \*

The situation as above outlined exists in spite of the fact that many of those most vitally concerned are complacently assuming that organized labor will refuse to take a plunge in support of a project which is a part of either socialism or paternalism. However, the following points made by James W. Sullivan, of the American Federation of Labor at a social insurance session of the National Civic Federation some time ago, are of interest:

"The state may justly carry out measures intended to protect all its citizens alike against

the various menaces to health and to control treatment of the sick. In the matter of meeting wage losses, the state may be expected to supervise associations for the purpose, and supply the machinery for such supervision. How much further should it go? The trade unionist stops to reflect when in theory he is brought to the line which sets the wage-workers aside as wards of the state, as subjects of special regulation, and as material for a social machinery run by state officials.

"Sickness insurance! What is to be insured? What is sickness? Who is sick? Who is to decide when one is sick? Who is to say when one's sickness is his own fault? Who is to determine justly many questions in the matter of sickness? To what degree is sickness a mere matter of mind? People of robust mentality ignore the aches and pains which frighten timid people. One's habitual attitude toward sickness counts for much. Some have the doctoring habit, some the 'patent medicine' habit, some the habit of ignoring what sends other people to bed. Under any form of sickness insurance, voluntary or compulsory, a certain proportion of the members of any group would quickly develop the habit, to be indulged in to the maximum degree of being 'on the funds.'"

\* \* \*

In this connection, most hopeful indications are found in the expressions by Samuel Gompers, President of the American Federation of Labor, and by Warren S. Stone, Grand Chief of the Brotherhood of Locomotive Engineers:

*Gompers*: "The fundamental fact stands out paramount, that social insurance cannot remove or prevent poverty. It does not get at the cause of social injustice. The efforts of trade organizations are directed at fundamental things. In attacking the health problem from the preventative and constructive side they are doing infinitely more than any health insurance law could do which provides only for relief in case of sickness and yet the compulsory law would undermine trade union activity. There must necessarily be a weakening of independence of spirit and virility when compulsory insurance is provided for so large a number of citizens of the state."

*Stone*: "The Brotherhood of Locomotive Engineers, representing about 82,000 railroad engineers of the United States and Canada, is vigorously combating various legislative measures for compulsory health insurance now pending before the legislatures of Ohio, New York and other states. We do not want any such form of insurance. There are many objections to these widespread efforts to secure legislative power for compulsory service for which the public must pay. The whole thing is un-American to my sense of things, autocratic and useless.

"Dr. George E. Tucker, formerly associated with the National Industrial Conference Board as its chief medical investigator, has said and we agree with him; that 'social insurance is an integral part of Germanism, an adjunct of that militarism that leads directly to social slavery along the well trodden paths of paternalism, registration, inspectorships and the whole mechanism of docketing and discipline.

"Furthermore the professional social reformer and the 'for revenue only' human uplifter, groping blindly for some new panacea upon which to focus public attention, gladly accept and enthusiastically welcome any proposal, which, for



the time being, offers opportunity for publicity and incidentally for replenishment of an always too uncertain financial income.

"Compulsory health insurance, as revealed by the evidence, has already been a signal failure in Great Britain because of the lack of fundamental knowledge of the public health problem, and because the principle upon which it is established lacks the element essential to a scheme seeking to be considered an insurance proposal; and that the essential difficulties requiring solution in connection with the public welfare from a health standpoint would not be met, and in the main their prevention would be entirely ignored. Also, facts show that the cost is always out of all proportion to the benefits to be derived, and finally that neither we nor any of the allied countries would be justified in copying any German plan which is known to have been conceived in iniquity, enforced through militarism and designed to destroy individualism and democracy."

"Finally it is said that sixty per cent of illness is preventable. Why, then, should these workmen be called upon to pay out millions for misfortunes that may be prevented by other means? These are some of the reasons why the International Brotherhood of Locomotive Engineers is opposed to all forms of compulsory health insurance."

\* \* \* \* \*

A brief and concise statement of the "pros and cons" is found in extracts from the recent annual address of Dr. C. V. Reynolds, president of the North Carolina State Medical Association:

#### ARGUMENTS

For insurance:

"Real or imaginary conditions in the United States have caused many welfare and social reformers to organize the American Association for Labor Legislation which has envolved the health insurance plan as the best method for social betterment."

Against this it is argued that "social evils do exist and some remedy or remedies should be sought, but while organized labor, the employer and the employed and the physician are opposed and the ones most vitally interested are opposed to compulsory health insurance. Why is it best?"

It is claimed that "practically every one who has considered the matter, recognizes that the distribution of the loss from sickness by means of insurance is desirable."

The opposition claim: "No new health insurance legislation should be enacted before we entirely rectify the unfairness of the present compensation law."

Those favoring insurance state that "compulsory insurance is necessary because under voluntary insurance those who need it most, are the ones who remain uninsured (lack of funds)."

Against this: "The present system whereby the poor are treated by the most efficient medical men is far better than medical service furnished by physicians which health insurance obtains."

It is argued that "compulsory insurance will stimulate the needed campaign for the prevention of illness."

The negative side of the question say: "Untrue—the State being already taxed through sickness insurance fund would not be available."

Again: "Life expectancy increases in G. between the ages of 18 and 60 (12 years)."

"M. M. Dawson says that this is not true—the increase was only 1.6 years. Have non-insured countries a better showing?"

For insurance it is further stated that it will "reduce the time lost by the wage earner."

This assertion contradicted by experience. Germany and Austria 6-19 to 9-19, increase A-16.4 increase."

"Malingering would be negligible in compulsory insurance."

As against this: "In G. malingering and pension hysteria has become a regular epidemic."

Those for insurance claim: "Disease causes poverty."

Those against: "Poverty causes of disease."

Proponents claim: "Insurance will solace the abuse of medical charity. Individual will receive less, but the physician as a whole will receive more per capita."

Those opposed claim that it "will extend medical charity abuse—unemployed casually employed. Self employed—poorly paid in insurance act."

Those opposed that it will "decrease medical efficiency. Destroys incentive for medical research and individual effort. Competent and incompetent get same pay. Destroys personal relationship between patient and physician."

To lessen human waste through preventable accidents, occupational disease, in fact, every prevention that will prevent, is an economical essential to material business, as it is to the human agents that guide it.

Notwithstanding the various pros and cons—we have under the old scheme 38,000,000 employed in the United States and of these 1,385,856 are ill at any given time—estimating nine days individual loss, gives a grand total of 12,022,104 sick days in the year.

Now one half of these illnesses are preventable. To say nothing of the greater and accumulative loss due to a lessened future earning power on account of illness and the sequel of such illnesses. It is not an economic waste to allow it to proceed?

The monetary loss, and the number of sick are important factors and the State—the employer and the employees are beginning to consider them as serious problems to be reckoned with. They now realize that the length of illness and the amount of medical aid is not the object sought—but rather the complete restoration of the individual to useful citizenship, which elevates the common standard of American physical fitness. Adequate care, will be, and should be, insisted upon.

Anything and everything that tends towards raising the general health standards through preventive or curative measures should deserve serious consideration, but our ambition to better conditions should not force anything upon us hastily. Wise and judicious council should be sought, prompt action should be taken, lest we inherit the avoidable mistake of others.

## OHIO HOSPITAL NOTES

Dr. Frank C. Anderson of Cambridge assumed his duties as superintendent of the Ohio State Tuberculosis Sanitarium, Mt. Vernon, September 1, having been appointed by the Board of Administration to succeed Dr. S. A. Douglass, resigned. Dr. Anderson served for two years in the Army, and for four years prior to that was assistant superintendent of the institution which he now heads.

—Officials of Akron Children's Hospital and Day Nursery will undertake a campaign for increased allowances from the city and other sources which will permit extensions that will make the hospital the nucleus of a model institution for the treatment of children. Plans include provisions for the treatment of children under sixteen and the maintenance of adequate child clinics. The present hospital has a capacity of 57 beds and a staff of 18 physicians under the direction of Dr. Walter Hoyt.

—A vial of radium valued at \$7,500 was lost at Cincinnati Jewish Hospital in August. Search of the premises located the metal in an incinerator, undamaged by an hour's contact with the fire.

—The Columbus Radium Hospital opened for reception of patients in early September. Incorporators of the new institution are Drs. Edward Reinert, R. R. Kahle, U. K. Essington and E. H. Chapin.

—Miss Laura M. Grant is the new superintendent of nurses and principal of the school of nursing at Cleveland City Hospital, and Miss Eleanore Waterman is instructor of nurses at the hospital. Both come from the faculty of Columbia University. Miss Grant has also been acting superintendent of the Pasadena School of Nursing and acting director of California State Bureau of Health, while Miss Waterman was connected with the Northwestern Hospital at Minneapolis, where she was superintendent of nurses in the maternity department.

—A Hillsboro resident has offered to purchase Highland County Hospital for use by the village of Hillsboro as a municipal hospital.

—Mercy Hospital, Canton, has announced that its laboratories, with thoroughly modern and complete equipment, are prepared to render assistance in diagnosis to the medical profession of that vicinity. Dr. S. Coopersmith is in charge of the pathological laboratory, and Dr. Chester M. Peters of the X-ray department.

—Beginning September 1 the cost to the city of maintaining patients at St. Elizabeth's and Youngstown City Hospital was increased from \$2.75 per day to \$3.50. Soaring operating expenses are given as the reason for the increase.

—Miss Margaret Mateer has resigned as superintendent of Lima City Hospital after fifteen years' service. Her successor is Miss Martha Lambert of Cincinnati.

—A \$100,000 addition now being erected at Mercy Hospital, Columbus, is the fifth that has been made at the hospital within ten years. When completed, the new building will give the institution a capacity of 100 beds, making it the second largest fireproof hospital in Columbus.

—Data that will doubtless have some bearing on the selection of a site for the new hospital for the feeble-minded is found in the fuel items of the annual reports of the various state hospitals. The reports show that it costs more to maintain an institution in northern Ohio than it does in the southern part of the state. The fuel bill at Toledo State Hospital was slightly in excess of the combined fuel bills of Athens State Hospital and Gallipolis Hospital for Epileptics.

—The new Schirrmann Hospital at Portsmouth, a three-story structure with a 50-bed capacity, was formally opened to the public, September 6.

### HOSPITAL RULING

According to a recent ruling by Attorney General Price, county commissioners of counties comprising a tuberculosis hospital district may not borrow money or issue bonds to replenish or pay back to the maintenance fund money that has been expended for hospital benefits.

Some time ago commissioners of a southwestern Ohio district took action to issue bonds to the amount of several thousand dollars for hospital purposes. The hospital board had been required to use money from the maintenance fund to provide additions to buildings and purchase supplies. It is now impossible to replenish this fund through the issuance of bonds, as had been expected.

### Autopsy Fee Increased

Butler County commissioners have increased the physician's fee for conducting autopsies in that county from \$10.00 to \$25.00. The action was taken in compliance with a request from the coroner who declared that if an increase was not granted he would experience difficulty in securing physicians to perform this work.

### New Books

*Diseases of Children.* Presented in two hundred case histories of actual patients selected to illustrate the diagnosis, prognosis and treatment of the diseases of infancy and childhood, with an introductory section on the normal development and physical examination of infants and children, by John Lovett Morse, A. M., M. D., Professor of Pediatrics, Harvard Medical School; Visiting Physician at the Children's Hospital, and Consulting Physician at the Infants' Hospital and at the Floating Hospital, Boston. Third edition. Octavo, illustrated, 639 pages, price \$7.50. W. M. Leonard, Publisher, 711 Boylston Street, Boston.



# MEDICAL COMMENT   %   %   ABSTRACTS AND CURRENT TOPICS OF INTEREST

**T**HE PUBLICATION COMMITTEE IS MORE THAN ANXIOUS TO MEET THE NEEDS OF THE JOURNAL'S READERS. IN CONSEQUENCE THE MEDICAL EDITOR IS INITIATING A NEW DEPARTMENT TO BE DEVOTED TO MEDICAL COMMENT, ABSTRACTS, AND CURRENT TOPICS OF INTEREST TO THE GENERAL PRACTITIONER. THE EDITORIAL POLICY OF THIS NEW DEPARTMENT WILL BE ONE OF SERVICE AND SUGGESTIONS AND CONTRIBUTIONS WILL BE GRATEFULLY RECEIVED.—MCM.

## Effects of Prohibition on the Hospitals

**F**EWER "drunks" in the hospitals; less public drunkenness; fewer injuries from brawls; fewer "family relief" cases applying at clinics for advice and consultation. In a nutshell, this appears to be the result of nationwide prohibition, as the hospital authorities see it. Reports from institutions throughout the country, as obtained by a staff investigator of *Hospital Management* (Chicago, November, 1919), show this very clearly. In addition, we are told that the demand for a separate institution to deal with alcoholic cases has ceased to be heard and that the labor situation in hospitals has greatly improved. "We have few changes on our pay-roll," one hospital reports, "and as a whole, a more self-respecting atmosphere." It is even suggested that, as alcohol is a factor in turning latent into active tuberculosis, prohibition may diminish the number of tuberculosis cases in hospitals. Says the paper named above, as abstracted by the *Literary Digest*:

"Hospital people naturally are asking themselves, 'How will prohibition affect our work? Is it going to decrease the number of charity cases? Will it make necessary a change in the character of the appeal and the service that the hospitals must provide in order to continue to get the support of the public? Will it change conditions as to employees?'"

"Some of these questions have been put before hospital executives in various parts of the country, handling various types of cases. Their answers, while in no case conclusive, are at least significant, and will be read with interest by those who are studying this subject."

Some particularly interesting information was obtained from Cook County Hospital, of Chicago, one of the largest general hospitals in the world, with a capacity of 2,700 beds, and a daily average of 1,850 patients. Dr. Carl Meyer, assistant warden of the institution, said:

"Since prohibition went into effect there has been a marked decrease in our hospital population. We are running about five hundred less than usual, our average at present being around 1,300. We are getting very few accident cases, the former record of twenty-five to fifty on Saturday nights having been reduced to one or two. Alcoholics have been almost eliminated, and accidents due to this condition, as well as medical cases growing out of exposure, have been practically nil. In fact, the 'typical bum' who used to make up a large percentage of the hospital is rapidly becoming obsolete. High wages, of course, may have had something to do with this.

"By reason of the fact that we are now handling fewer patients than at any other time since 1909, our needs are changing. We were formerly overcrowded, but with the reduced number of cases coming to us for attention it looks as though our present facilities, as far as general hospital work is concerned, will be sufficient for eight or ten years to come. Branch hospitals were formerly being considered, and these now may be unnecessary. We need a children's hospital, and other special facilities, but as far as our general work is concerned we are in an excellent position, and will be able to take care of the needs of an increasing population for another decade."

Dr. Arthur B. Ancker, superintendent of the St. Paul City and County Hospital, an eight-hundred-bed municipal institution, said:

"It is of record here there has been a very marked decrease in the number of acute alcoholics, as well as in the number of patients suffering from other conditions due to alcoholism, since July 1 of this year.

"There is no doubt in our minds that in the not distant future all hospitals, especially those supported at public expense, will share our experience in that direction. Many of the emergency cases that we are called upon to care for—indeed, many of those that can not be so classed, have diseases or injuries the causes of which are directly or indirectly traceable to the use of alcohol."

Dr. Charles A. Drew, superintendent of the City Hospital, Worcester, Mass., says:

"There has been a very great reduction in the number of alcoholics admitted, and there have also been fewer admissions to our public wards since prohibition went into effect.

"It is very difficult to compare the past year with the preceding year, because in September, October, and November of last year, we were crowded with cases of influenza, so that I can only give you an impression without exact figures. Our income, however, for the month of October, 1919, was about 30 per cent. higher than the average monthly income for several preceding years, and this in spite of the fact that our daily average number of patients was below the monthly average of several former years.

"We do occasionally get an alcoholic who has been drinking Jamaica ginger and perhaps some of the 'straight stuff.'"

"The effect on our hospital has been more marked in regard to male employees. Prior to the coming of prohibition it was a common thing to discharge a man today for intoxication and hire him again day after tomorrow with an increase in salary. For the past four months we have had almost no trouble with the male help because of intoxication, and the number of alcoholics admitted has been not over 10 per cent. of the average prior to the coming of prohibition.

"It is my opinion that many people who for-

merly came to the hospital have means to pay for a physician and nurses at home, and many people who in past years have not been able to pay the hospital will now be able to pay in part for board and care."

A particularly interesting angle on the situation is given by Dr. Irwin H. Neff, superintendent of the Norfolk State Hospital, Norfolk, Mass., who writes:

"This hospital is caring exclusively for alcoholic and drug cases; having a State-wide sociological department devoted to these purposes, it is particularly sensitive to conditions resulting from national prohibition.

"In the Legislative Report of February, 1919, of the special commission, relative to the control, custody, and treatment of defectives, criminals, and misdemeanants, the following statement was made:

"The problem of the inebriate and the user of drugs is in a transition stage. Whether prohibition will reduce the alcoholic to numbers so small as to remove the need of public recognition and treatment, or whether the prohibition of alcohol will multiply the drug-user, who already constitutes a difficult class, even though drugs are strictly prohibited, are questions that can not be answered in advance. Those who use stimulants because of the habit overtaking them, may be expected to become fewer, while the neurotic individual whose disorder drives him to the use of narcotics or alcohol can not be expected to change his bent by operation of law. The intensive narcotic problem is likely, therefore, to remain."

"This deliberation of the Commission should reflect the opinion of those interested and having a knowledge of the inebriate problem."

The moral side of the question is suggested in the following comment by Sister M. Genevieve, of St. Elizabeth's Hospital, Youngstown, Ohio, who wrote:

"The hospitals are in a fairly good position to observe the effects of the operation of the dry law. The number of the old type of alcoholic patients received into the hospital is 90 per cent. less. However, they are being replaced by a more pitiable class—small, thank God! We are called upon to treat victims of various poisonous brews. Some of these have been hurried to their ruin by a reckless determination to beat the law.

"We have a God-given free will. Virtue is a habit acquired by the exercise of that will in repeated selection of the right. Temperance is a virtue; man can not be constrained to practise it by laws that simply take his bottle. He must will to smash it himself."

#### AMERICAN CHILD HYGIENE ASSOCIATION

The American Child Hygiene Association will hold its annual meeting in St. Louis on October 11, 12 and 13. This is the first meeting that the organization has held in the southwest and a well-rounded program has been prepared that will be of exceptional interest to physicians specializing in obstetrics, pediatrics and public health. The last day's session will be held jointly with the Central States Pediatric Society which convenes in St. Louis, October 13 and 14.

#### New A. M. A. Directory

The seventh edition of the American Medical Association directory of physicians is now being compiled and will be off the press about the first of the year. The forms for Ohio will be made up in the near future and every member of the State Association who desires to be recorded in the directory as a Fellow of the American Medical Association should file his application without delay.

Names of members of the state associations are printed in large type and the names of non-members, including those who are ineligible for membership, appear in small type. Names of Fellows of the A. M. A. are in large type and are followed by the well known symbol of the cross in the circle.

The subscriber to *The Journal A. M. A.* who is not a Fellow, will shortly receive a letter from Chicago headquarters requesting that application for Fellowship be made at once, and those members of the Ohio State Association who are not Fellows will receive blanks for use in making application for Fellowship. Members who have recently changed address should also notify the A. M. A. of this fact in order that proper correction may be made in the new directory.

#### School Supervision Increased

School health supervision is to receive far greater attention in Ohio this year than ever before. While reports are as yet too scattered to permit of any definite summary of the prospects for the year, it is known that complete systems of physical examination and supervision are to be installed in many counties and that in others health commissioners are to give particular attention to the schools in their disease-control activities.

A recent bulletin from the State Department of Health to all district health commissioners pointed out methods of enlisting the interest of school officials and teachers in the health program and urged instruction of teachers in the recognition of early symptoms of communicable disease and physical defects. Another bulletin of information for teachers in regard to communicable diseases is to be issued for general distribution soon.

A standard record for physical examinations of children, drawn up by the State Departments of Health and of Public Instruction, is being used by many health commissioners this fall.

More Ohio Children received physical supervision in their schools during the first six months of 1920 than in the entire previous history of the state and a much greater increase is assured during the coming school year.



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## Ten Seals Per Capita Asked for Funds to Combat Tuberculosis

In common with every other state in the Union, Ohio is preparing for the annual sale of Christmas seals to combat tuberculosis. Seals go on sale in every county in the state beginning December 1. There will be an intensive campaign during the first ten days of December, the seals remaining on sale up until Christmas.

There were sold in Ohio last year approximately 20,000,000 seals, which was the best in the history of the fight against tuberculosis in the state. Every community which sold its quota of seals was enabled to carry on during the year very effective public health work. In some cases it was the local society for the prevention of tuberculosis and in others local public health leagues and school organizations. This year many new public health leagues have been formed and are planning to finance the health activities for the coming year on a much broader scale.

The Ohio Public Health Association, organized during the past year as the successor to the Ohio Society for the Prevention of Tuberculosis, will act as the state agency in the sale of seals this year and is expecting a forthcoming campaign to give impetus to the organization of local health leagues. The goal for 1920 is ten seals per capita or ten cents from each person in the state as a contribution to the cause of good health.

The seal this year will be slightly different from that of former years in that it will not display the emblem of the Red Cross. While the emblem of the Red Cross has been withdrawn from the seal, Red Cross officials will give the campaign their moral support. Dr. Livingston Farrand, Chairman of the Central Committee of American Red Cross, in a letter to the National Tuberculosis Association, says: "The Red Cross not only extends its best wishes for the great success of the seal, but would hope to cooperate to that end in every practical way." In many instances local Red Cross Chapters will have Christmas seal committees to conduct the sale of seals.

School teachers and pupils are manifesting more than usual interest in the campaign this year because of the fact that funds derived from the sale of these tiny emblems of holiday cheer will be used to carry on the Modern Health Crusade and other health activities in the schools.

There is a crying need in every community of Ohio for more nursing service and more sanatoria facilities for the care of those suffering from tuberculosis. The care of several thousand soldiers afflicted with tuberculosis has placed upon each community a new responsibility. Sanatoriums are overcrowded and have felt the pinch of the high cost of living. Official boards in charge of these institutions are hampered by tax limitations and demands for other governmental

functions. There will be much work for the voluntary health agencies to perform during the coming year and, as the annual sale of seals at Christmas time furnishes the means for carrying on this work no effort should be spared in making this year's seal sale the greatest in the history of Ohio.

*The American Red Cross in the Great War*, by Henry P. Davison, Chairman of the War Council of the American Red Cross. Illustrated. Price \$2.00. (All author's royalties on this book go to the Red Cross.) The MacMillan Company, New York. Publishers.

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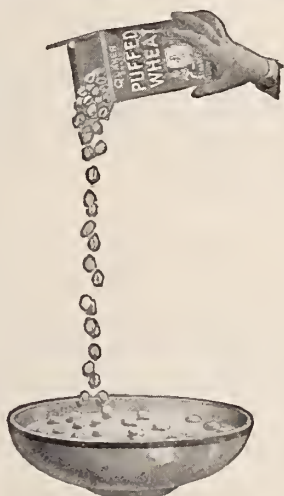
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## DEATHS IN OHIO

*Sylvester P. Bishop, M. D.*, Bellevue Hospital Medical College, New York, 1865; aged 80; died at his home in Delta, Fulton County, August 15. During his 56 years of residence in Delta Dr. Bishop was prominent in his profession and civic activities, serving on the city council and board of education. He was held in high esteem by the community in which he lived and the anniversary of his fiftieth year in medical practice was made the occasion of a banquet by the Fulton County Medical Society several years ago. Besides his wife, he is survived by two daughters and one son, Dr. Park S. Bishop of Delta.

*Jerome Bland, M. D.*, Starling Medical College, Columbus, 1869; aged 80; died at his home in Bucyrus, August 31. Dr. Bland located for practice in Bucyrus in 1883 and practiced steadily there until 1905, when ill health forced him to retire. He leaves a widow and two daughters.

*Galen L. Cline, M. D.*, Medical College of Ohio, Cincinnati, 1882; aged 63; died at his home in Perintown, August 29. Dr. Cline had been a practicing physician in Clermont County for more than 30 years. He was chairman of the Democratic Executive Committee of the county and at one time served in the state legislature. He leaves a widow.

*Perry Gregg, M. D.*, Toledo Medical College, Toledo, 1883; aged 80; died at his home in Dayton, August 6.

*John C. Martin, M. D.*, Jefferson Medical College of Philadelphia, 1881; aged 64; member of the Ohio State Medical Association; died at his home in Findlay, August 31. He is survived by his wife, one daughter and one son.

*John Henry Rheinfrank, M. D.*, University of Michigan Medical School, Ann Arbor, 1864; aged 80; died at his home in Perrysburg, August 16, from angina pectoris. Dr. Rheinfrank practiced medicine in Perrysburg for 56 years and founded the local hospital which bears his name. He was actively interested in civic affairs and served a number of terms as mayor of the village. Surviving are his wife, one daughter and three sons, one of whom is Dr. William H. Rheinfrank of Perrysburg.

*Nathan Tucker, M. D.*, Bellevue Hospital Medical College, New York, 1866; aged 83; died at his home in Mt. Gilead, August 16, following a year's illness with Bright's Disease. Dr. Tucker was a native of Mt. Gilead and spent his entire life there. He retired from medical practice 20 years ago. He is survived by his wife.

*Leroy S. Woods, M. D.*, College of Physicians and Surgeons, Baltimore, 1887; aged 64; member

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of the Ohio State Medical Association; died at his home in Rawson, August 20, from angina pectoris. Dr. Woods had practiced in Rawson for many years. He served for 28 years as president of the village school board and was a member of the county board of education.

### Mississippi Valley Conference in Ohio

Dr. C. B. Bliss of Sandusky, president of the Ohio Public Health Association who attended the Mississippi Valley Conference on Tuberculosis at Duluth, Minn., September 2, 3 and 4, succeeded in bringing the next conference of the Mississippi Valley states to Ohio. It will be held next September at Cedar Point and will bring to Ohio delegates from eleven states—Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, North Dakota, South Dakota, Nebraska, Missouri and Ohio.

Officers elected by the conference for the ensuing year are Dr. William McMiller, secretary of the Missouri Association for the Relief and Control of Tuberculosis; Dr. Eugene B. Pierce, superintendent and medical director of the Michigan State Sanitorium of Howell, Michigan, vice-president, and H. E. Roulfs, field secretary of the Ohio Public Health Association, secretary.

### State Medical Board Notes

The next meeting of the State Medical Board will be held on October 5.

On August 13 Mrs. William Groner, Mrs. David Quail and Mrs. Lizzie Smith, Wellsville, were convicted in Mayor Ingram's Court of illegal medical practice and fined \$100.00 and costs each. Fines were suspended during good behavior.

Mrs. Wilhelmina Sucky, Blaine, was convicted in Justice Wm. Britton's Court on August 14 of practicing midwifery without a license. A fine of \$25.00 and costs was imposed.

Julius Schmelter and Augusta Jepson, Bridgeport, were found guilty of practicing medicine without a license on August 18 and fined \$25.00 and costs each.

Charges have been filed against the following persons for practicing medicine without a license, and the cases will be heard at an early date: Laura P. Smythe, Urbana; Mrs. Mike Scopick, Barton (Belmont County); and George Schuster, Anna Hodneckski, Mrs. Susanna Schumm, S. N. Van Orsdal, Mrs. Lutz, Mrs. Sarto, Mrs. Huston, Mrs. Tochek, and Carrie Collins, all of Youngstown.

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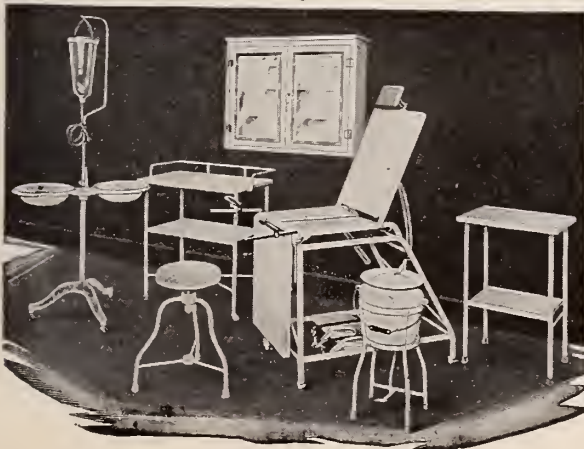
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### Data on Physicians' Incomes Is Compiled by New York State Medical Society

With the object of obtaining information as accurate as possible concerning physicians' incomes and the actual expense of practice in the several types of communities as well as an attempt to ascertain the amount given without compensation to hospital and college work, the committee on Medical Economics of the New York State Medical Society has recently completed a compilation of replies to questionnaires on the subject.

The questionnaires were arranged so that each physician might designate whether he were a general practitioner, a specialist, or an institution worker. If a specialist, he was to state whether his whole time was devoted to his specialty or whether he combined general practice with his special work.

The incomes were to include only actual collections and not amounts charged.

The data together with brief conclusions which are considered conclusive in answer to those who claim that the public is not getting satisfactory medical service, is here reproduced:

In New York City the incomes from general practice averaged \$5,876.92, and the expenses \$2,355.63; specialists earned \$12,717.50, with expenses of \$4,280.42, and "part-time" specialists \$9,022.71, expending \$3,183.23. The average

number of hours given each week without compensation were 10 by the general practitioner, 14.1 by the specialists, and 15.6 by the "part-time" specialists. In Brooklyn the incomes from general practice averaged \$5,691.35, expenses \$2,161.72; specialists, \$11,691.43 with expenses of \$3,286.80, "part-time" specialists \$6,269.07, expenses \$2,102.90. The average number of hours given weekly, without compensation, was 7 5/8 by the general practitioners, 15 2/7 by the specialists, and 10 1/2 by the "part-time" specialists.

In the second class cities the general practitioner received an average of \$3,635.55, with an expense of \$1,853.58; specialists, \$8,604.16, with expenses of \$2,502.38; "part-time" specialists \$9,037.50, with \$3,011.75 expenses.

The general practitioners in this group of cities gave 3 1/4 hours per week without compensation, the specialists gave 9 1/2 hours, and the "part-time" specialists 4 1/4 hours.

Incomes in the third class cities derived from general practice were \$3,554, with expenses of \$1,004.00. The specialists received \$6,439.00, with expenses \$3,375.00 and the "part-time" specialist \$10,745, with expenses of \$3,687.50.

The time given weekly without compensation was 3 2/3 hours by the general practitioners, 7 hours by the specialists, and 6 hours by the "part-time" specialists.

In the fourth class cities general practitioners received \$4,766.40, with expenses \$1,752.70; the

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specialists received \$9,101.47, with expenses \$3,774.86 and the "part-time" specialists \$8,544.33, with expenses of \$2,759.18. General practitioners in the group gave 7½ hours weekly, without compensation; specialist 9¼ hours, and "part-time" specialists 8½ hours.

Incomes from general practice in the large towns averaged \$5,275.88, with expenses of \$1,729.96. Specialists received \$6,175.00, with expenses of \$2,700.00, and "part-time" specialists \$6,776.33, with expenses \$2,078.75. The average number of hours given weekly without compensation by this group were: 7 1/10 by general practitioners, 15 by specialists, and 10 1/5 by "part-time" specialists.

The small town general practitioner received \$3,419.68, with expenses of \$1,222.26; the specialists \$3,575.00, with expenses of \$1,125, and the "part-time" specialists \$4,666.66, with expenses of \$1,466.66. The average number of hours given weekly without compensation were: 3¾ by general practitioners; 12½ by specialists, and 8½ by "part-time" specialists.

Institutional workers earned on an average \$4,002.01, with an expense of \$660.50, and gave without compensation, 4 3/5 hours per week.

As would be expected, the proportionate number of specialists decreased rapidly in cities of the fourth class and in the towns. Throughout the entire lists, including New York City, the number of "part-time" specialists was larger than the number giving their entire time to one special line of work.

Numerous interesting deductions may be drawn from these figures, and not the least important is that considering the time and money outlay necessary to acquire the right to practice medicine the financial rewards are not favorably comparable with those of other lines of endeavor. It is true, however, that there, as elsewhere, when we deal with averages, we reckon with giants as well as with dwarfs, and the Committee's returns show several incomes of \$90,000 to \$125,000 per year, so that the practice of medicine need not be wholly unattractive, even to the man who estimates success merely by dollars.

The general ratio of income to expense is fairly well maintained throughout these data and may be reasonably accepted as final.

In New York City and Brooklyn the specialist wins the largest reward, while throughout the State men who are engaged in general work and at the same time specialize in some branch of medicine earn the largest incomes.

It would appear that this comparative financial advantage of the "part-time" specialist is indicative of a healthy condition of the practice of medicine.

The men so engaged are unquestionably meeting necessities which are arising with the growth of medicine. The criticisms offered by the pro-

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ponents of certain kinds of social insurance that the public is not getting satisfactory medical service cannot be met in a more convincing way than by this statistical finding.

## MEETINGS OF COLUMBUS ACADEMY OF MEDICINE

(James A. Beer, M. D., Secy.)

Columbus Academy of Medicine held its first fall meeting, September 13. Dr. W. F. Bay read a paper on "Diseases and Injuries of the Feet." After describing the normal foot he took up in detail the conditions most frequently met with and gave means of correcting them. Discussion by Drs. W. J. Means, Steinfeld, C. M. Shepard and J. F. Baldwin. Dr. R. R. Kahle gave a talk on "Toxic Goiter and Malignancy—Indications for Radium and Surgery." He compared results obtained in goiter from radium and X-ray with those of surgery, stating that in cases of malignancy, in which operation is often futile, the use of radium and X-ray have been of distinct value. Discussion by Drs. Kirkendall, Baldwin and Ramsey.

## COUNTY SOCIETIES

### THIRD DISTRICT

*Allen County* Medical Society met in regular session at Lima on September 7 with 21 members present. Dr. Henry O. Mertz of Indianapolis gave the paper of the evening on "Renal Tuberculosis," illustrated by stereopticon views. The discussion by Dr. Mertz was very interesting, showing in detail the technique in diagnosis of renal tuberculosis. He said that diagnosis was very difficult in many cases and that nephrectomy was usually necessary to effect a cure, or was the only hope.—A. S. Rudy, Correspondent.

*Hardin County* Medical Society, in monthly session at Kenton, August 12, enjoyed an excellent address by Dr. A. M. Steinfeld of Columbus on "Differential Diagnosis and Treatment of Tuberculosis, Lues and Osteomyelitis."—D. H. Bowman, President.

### FOURTH DISTRICT

*Sandusky County* Medical Society held its August meeting at Birchard Park, Fremont, on the afternoon of the 25th. Dr. W. R. Deemer, essayist of the occasion, was unable to be present, but his well prepared paper was read by the secretary and thoroughly discussed by the society. Following the scientific program, several of the members contested for honors in quoits

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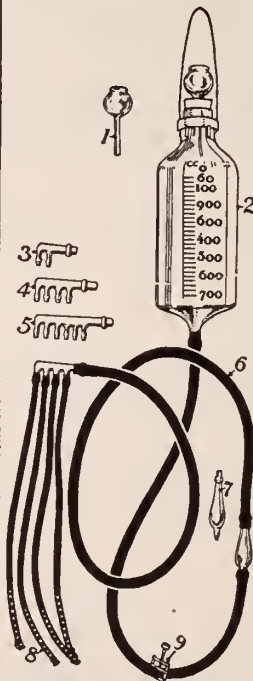
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and the society later repaired to the home of Dr. D. W. Philo, a short distance from the park, where a sumptuous five course dinner was served, a number of Dr. Philo's fine young broilers having been sacrificed on the altar of Aesculapius. Future meetings will be held on the last Thursday evening of each month, as is customary in the winter months. The plan of holding afternoon meetings during the summer was adopted to stimulate attendance and succeeded in bringing out more than fifty per cent. of the members, as Wednesday afternoon is observed as a half-holiday during the summer months.—C. I. Kurtz, Secretary.

#### FIFTH DISTRICT

Lake County Medical Society's regular monthly session was held at Broadlawn Inn, near Painesville, September 13. Dr. M. A. Blankenhorn of Cleveland read a comprehensive paper on "The Clinical Significance of Jaundice," which was thoroughly discussed by Drs. Ice, Montgomery, Jones, Moore, Park and R. K. Updegraff. Dr. Updegraff then gave a good talk on organization work. Business transactions included the assignment of lectures to nurses in training at Lake County Hospital, and the reception of Dr. B. S. Parks of Fairport Harbor, as a new member and Dr. Amy Kaukonen of Painesville, on transfer from Ashtabula County.—E. S. Jones, Secretary.

#### SIXTH DISTRICT

Mahoning County Medical Society's annual outing and picnic at Brier Hill Park, Youngstown, August 26, was attended by about 100 physicians. Baseball, tennis, pistol practice and cards were diversions of the afternoon. In the baseball game, the feature of the picnic, Youngstown Hospital team defeated St. Elizabeth's Hospital team by a score of 11 to 10. The latter aggregation carried off honors in last year's game.

Summit County Medical Society met for its first fall meeting on September 7. The meeting was enthusiastic and about 55 physicians attended. Dr. Walter G. Stern of Cleveland, gave an excellent address on "Orthopedic and Casualty Surgery," illustrated with many interesting lantern slides. He stated that fifty per cent. of the cripples are due to accidents and it is the obligation of the orthopedist to do their very best for these unfortunates. After Dr. Stern's address the regular business session was held, followed by a discussion of legislative matters. At the October meeting Dr. H. J. Gerstenberger of Cleveland will present a paper on "Synthetic Milk."—U. D. Seidel, Secretary.

#### EIGHTH DISTRICT

Morgan County Medical Society held an interesting meeting at the Malta Hotel, August 5. A paper was read by Dr. L. E. Sharp on "Focal Infections, as Seen by a Dentist." The subject

was thoroughly discussed and a profitable evening spent. With a well organized society, including a number of young men who have recently moved to the county, Morgan County Society is holding fine meetings and is doing better work than ever before. Dentists of the county are attending the meetings, through invitation, and some excellent papers have been contributed by their members.—C. E. Northrup, Correspondent.

Muskingum County Medical Society met in regular monthly session at Zanesville Chamber of Commerce, September 1, with 25 members present. The program consisted of papers by Dr. W. A. Melick on "Uterine Prolapse, Its Cause and Treatment," and Dr. A. E. Walters on "Keratitis." A general discussion followed the presentation of the papers, after which there was a discussion of legislative matters.—Maurice Loebell, Secretary.

#### TENTH DISTRICT

Union County Medical Society met at Marysville, August 30. The annual election resulted in the selection of Dr. C. O. Thompson, Raymond, as president, and Dr. E. J. Marsh, Broadway, secretary-treasurer. A resolution was adopted to the effect that no life insurance examinations would be made for a fee less than \$5.00.—F. C. Calloway, Secretary.

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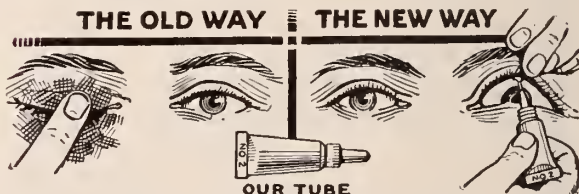
For full particulars see New York Medical Journal of June 12, 1920, or Journal of American Medical Association for May 29, or address

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## Modern Health Crusade Extended in Ohio Schools

The Modern Health Crusade method of training children in health habits will be developed in the rural schools of eight counties in Ohio during the ensuing school year, according to arrangements completed by Miss Virginia Lewis, Crusade Director of the Ohio Public Health Association, with Superintendent Vernon S. Riegel of the Ohio State Department of Public Instruction.

The counties in which the Crusade movement is to be intensified are Franklin, Cuyahoga, Summit, Lucas, Marion, Union, Medina and Monroe. While the Modern Health Crusade was carried on in the Columbus city schools and a few other counties last year, under the auspices of the Junior Red Cross, this is the first intensive drive under state-wide supervision and in cooperation with the Department of Public Instruction.

Educators and health authorities have pronounced the Crusade movement, which was established by the National Tuberculosis Association, as perhaps the most effective means ever devised for interesting children in a practical way in personal hygiene and health. It has had wonderful and far-reaching results in improving the health of children by making the quest for health a fascinating pursuit and in making the task of the teacher easier and improving school work generally.

The Crusaders are children between six and sixteen years of age. They are assigned certain health chores which they must perform daily, keeping record of performance. Stress is placed on the importance of weighing school children, measuring heights, comparison with normal weights and instruction in diet. Here are the health rules for the Crusaders:

1. Keep windows open or stay out of doors when you sleep, play, work or study. Breathe fresh air always and through your nose. Take ten deep breaths every day.

2. Eat wholesome food, including fruit, coarse breads, cereals, and vegetables besides potatoes, rice and beans. Chew thoroughly. Have three meals a day. Avoid fried foods, soggy breads, pickles, spices, much meat, pie crust, cake and all impure candy. Drink plenty of pure water and milk and use your own cup. Drink no tea, coffee, alcoholic drinks nor soft drinks containing injurious drugs. Do not smoke or use tobacco in any form.

3. Make sure that everything that you put into your mouth is clean. Wash your hands always before eating or handling food. Wash your ears, and neck as well as your face and clean your fingernails every day. Bathe your whole body twice a week at least and shampoo often. Brush your teeth and rinse your mouth thoroughly

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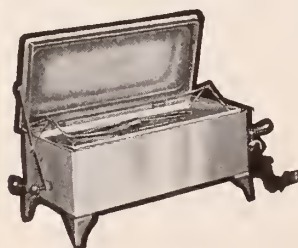
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every day, after breakfast and supper. Have all cavities in your teeth filled. Consult a dentist twice a year.

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5. Get a long night's sleep. Whenever you cough or sneeze, turn your head aside and cover your mouth with your handkerchief. If you must spit, spit only where it will be removed before person or fly can touch it. Have a clean handkerchief. Keep your clothes neat. Brush your shoes before going to school. Keep your mind clean and cheerful. Be helpful to others.

### Warning Against Diphtheria

Extreme care in diagnosing suspected cases of diphtheria has been urged upon physicians by the State Department of Health, following receipt of reports that diphtheria of unusually high virulence is present in the state.

Attention is called to the free diagnostic service offered in the laboratories of the State Health Department, and to the provision in the Hughes-Griswold law whereby district boards of health must provide free antitoxin.

The department's diphtheria warning also urged vigilance on the part of health and school authorities and of parents in protecting children against the disease.

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*Information Wanted*—A number of inquiries have come to the State Association relative to The National Physician's System Company. If any physician has information concerning this firm or its representatives the Columbus office of the State Association will appreciate receiving same.

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### Tuscarawas County Joins Opposition

There is continual evidence that the doctors of Ohio are at last aroused to the dangers of compulsory health insurance being propagated in this state by the American Association for Labor Legislation and other so-called welfare agencies. Systematic study of the subject by numerous medical societies within the last year has resulted in the adoption of resolutions voicing unqualified opposition to the plan. The following resolution, adopted by Tuscarawas County Medical Society at a recent session, is typical and shows that the medical profession, in its usual generous spirit, is not basing its opposition on selfish motives but on economic principles:

*Whereas*, An effort is being made to have a law enacted in Ohio to force upon the laboring men of the state the so-called health insurance plan of Germany and other European countries, and

*Whereas*, We are informed that in the countries where these plans have been tried, it has been shown to pauperize the laboring classes while benefitting the employers, by giving opportunity for the dishonest to take advantage of the plan, and often preventing the honest and independent workman from procuring the hospital, medical and nursing services he desired, and

*Whereas*, There has never been and is not now a need or desire on the part of the laboring classes for such a law, and

*Whereas*, The nearest approach to this plan in this country that we have known, has had a distinct tendency to pauperize the laboring classes, causing actual loss of working days per year for each man interested, and

*Whereas*, We believe conditions in Tuscarawas County are such that such a law would be of no benefit to the laboring men, to the employers or to any other person in the county, and would probably be detrimental to some, therefore be it

*Resolved by the Tuscarawas County Medical Society*, That there has been no need shown among the citizens of Ohio for a compulsory health insurance law, that so far as we can learn it will be of no advantage to the honest laboring classes, the employing class nor the professional class or any other Ohio people, and be it further

*Resolved*, That the Committee on Medical Legislation be instructed to study the subject further and report any new developments or information on the subject, and be it further

*Resolved*, That unless there shall be some reason shown for such legislation, the members of the Tuscarawas County Medical Society will use their influence to prevent the passage of the proposed law, and be it further

*Resolved*, That the secretary of the Tuscarawas County Medical Society be instructed to convey to the Legislative Committee of the Ohio State Medical Association, a copy of these Resolutions and the preamble, and if it be desirable to our Representative and Senators in the State Legislature.

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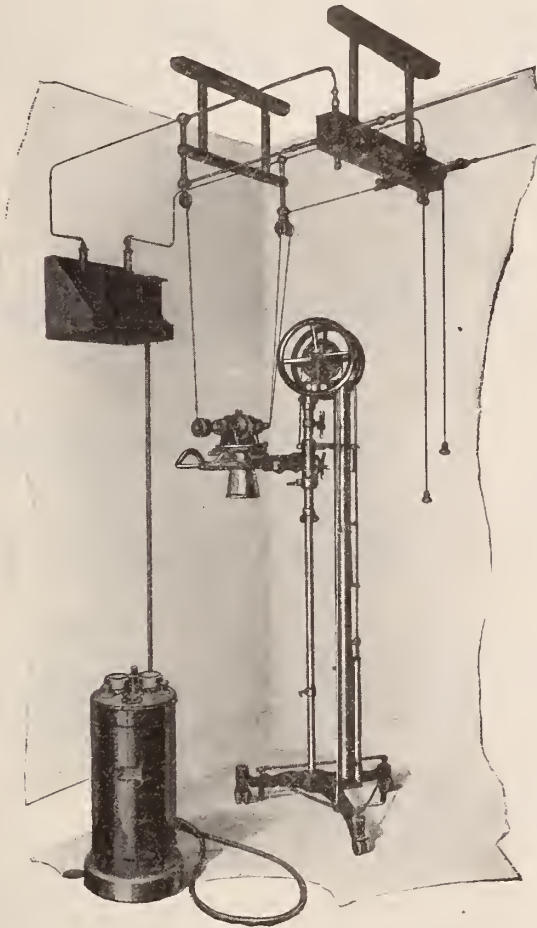
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## NEWS NOTES OF OHIO

**Columbus**—Dr. C. C. Hugger has resigned as a lieutenant in the United States Navy and taken residence in the New York City Hospital. Dr. Hugger entered service during the war as a member of the Columbus Naval Unit. He has recently been located at the Naval Hospital in Brooklyn.

**Hamilton**—Dr. C. D. Smedley has moved from this city to Cleveland. Dr. Smedley was connected with the local health department as district physician.

**Cambridge**—Dr. F. M. Mitchell, secretary of Guernsey County Medical Society, has returned from New York, where he completed a six weeks' post-graduate course.

**Bowerston**—Dr. W. E. Masters has moved to this village from Dexter City, Noble County.

**Dayton**—Dr. Robert C. Austin has been appointed surgeon for the Dayton district of the United States Public Health Service. Dr. A. E. Hewitt received the appointment for the eye, ear, nose and throat specialty.

**Centerburg**—Dr. S. R. Best, who moved from this city to Gary, Indiana, three years ago to become surgeon for the United States Steel Corporation, has again taken up residence here.

**Columbus**—At the annual meeting of the Woman's Medical Club of Columbus, held recently, Dr. Ida Wilson was elected president; Dr. Isabel Bradley, vice-president, and Dr. Alice M. Johnston, secretary-treasurer.

**Findlay**—Dr. Glen A. Sheppard, a former practitioner of New Burlington, has opened offices here.

**Lima**—Allen County commissioners have employed Dr. Frank P. Stafford for a third term as physician for the indigent and at the county infirmary.

**Dayton**—A case containing instruments and medicines was stolen from the automobile of Dr. F. A. Duckwall recently.

**Columbus**—Dr. Herman L. Harris, roentgenologist, recently suffered the loss of a finger, through amputation necessitated by X-ray burns.

**Lower Salem**—Dr. John F. Hill has moved to this village from Harrietsville.

**Waynesfield**—Dr. J. M. Day, for many years a practicing physician here, has located in Lansing, Michigan, where he is associated with Dr. Chauncey L. Barber.

**Hamilton**—Dr. P. E. Decatur has been appointed plant physician for the Ford Tractor Company, a local establishment employing 700 men.

**Columbus**—Dr. Thomas H. Haines is temporarily located in Jefferson City, Missouri, where he is engaged in a state survey for the National Committee for Mental Hygiene.

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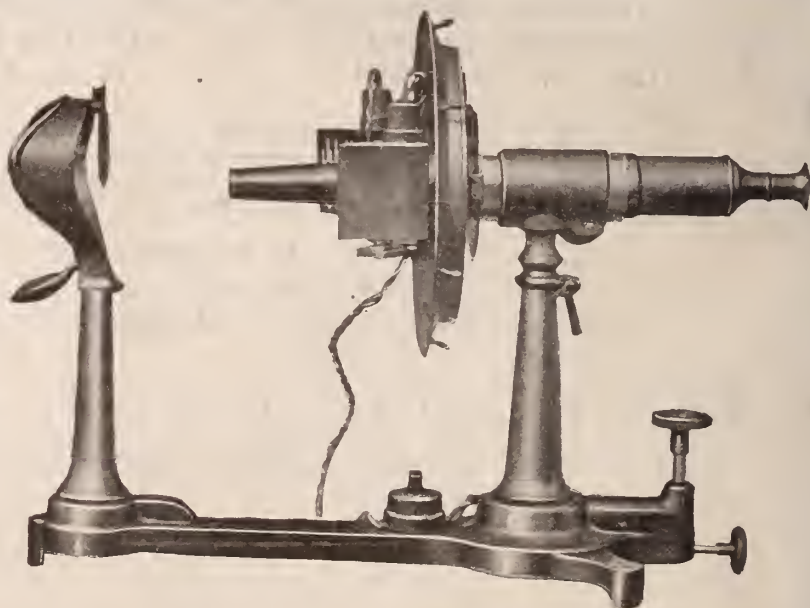
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# Ohio State Medical Journal

Published monthly by

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131 East State Street, Columbus, Ohio

Telephones: Ohio State 4905; Bell Main 5259

This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.

Issued under the direction of the Publication Committee.

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## EDITORIAL COMMENT

by D. K. M.

### "What's 'Round the Corner?"

In these troublous times of unrest, pregnant with sudden changes in public sentiment and fraught with the possibility of radical innovations in government, there is "a handwriting on the wall." Let's try to read the message and be prepared to meet difficult situations.

Business interests and other citizens are taking a thorough inventory in preparation for what is coming. What apathy, complacency and indifference exists among members of the medical profession must be overcome. There never was a time when mutual understanding, cooperative effort and concerted action was as necessary as now.

A more well-defined conscientiousness in the profession must be developed. Because of its peculiarly close contact with certain fundamental social problems the medical profession is in the best possible position to find a solution. It owes a duty to itself and to the public; its civic power is practically unlimited provided it chooses to exert its influence.

Repeatedly have the officers of the State Medical Association, the leaders in the profession, and *The Journal* emphasized the imperative need of preparedness, of strong centralized organization, this being the only means by which the best thought in the profession can be forcefully expressed.

Every physician owes it to himself as well as to his profession to overcome distrust and to aid in the establishment of an harmonious plan of cooperation. The foundation of this lies in the county medical societies which not only need the support of all available members but each member needs the influence of the entire group.

A new calendar year laden with many problems is approaching. Each member should show his appreciation to county society officers by seeing that his dues for the coming twelve-month are paid well in advance. With innumerable committee activities and with the convening of a new legislature, the headquarters of the State Association will be overburdened with detail. All possible preparation should be made in advance.

It is needless to enumerate again and again the many benefits and the absolute necessity of an actively functioning State Association, including *The Journal* itself, the only medium through which the profession can secure careful and comprehensive analyses of important problems as they affect medical practice; the Workmen's Compensation Bureau, the Medical Defense plan, Medical Education, and extension work, activities on public policy and legislation, protection of the profession from petty prosecution

and unfair restrictions, the solution of economic problems, the promotion of scientific research, leadership in public health matters including the activities now under way for a solution of the crippled children problem, a standardized system of physical instruction in the schools, as well as a central clearing house for information; a headquarters which responds immediately to innumerable requests for service and available for the quick mobilization of medical resources in sudden crises.

The answer is obvious to the question of "whether the children of unrest are more powerful than the children of order?"

### Chiropractic Proposal

After a year of effort in securing signers to a petition, the Ohio Chiropractic Association has filed with the Secretary of State a proposed law to be initiated through submission to the General Assembly. This petition for "a bill to establish a chiropractic board of examination and license practitioners of chiropractic; to define chiropractic; to prescribe qualifications of practitioners; to provide for the revocation of licenses; and to repeal all acts and parts of acts in conflict with the provisions of the proposed bill," is signed by about 48,000 Ohio voters.

The filing of this petition is the culmination of the chiropractic activities referred to from time to time in *The Journal*. The petition shows that signers were secured in 70 counties of the state and indicate a well-financed and determined effort by organized quackery to destroy statutory provisions for the protection of the gullible sick against unqualified and ignorant practitioners. The proposed bill provides in substance for the appointment by the governor of a state chiropractic board of three members, appointed from a list recommended by the Ohio Chiropractic Association, and would grant licenses to those who passed such board's examination. Applicants would only be required to furnish the board evidence of high school graduation or "its equivalent;" should be 21 years of age and graduates of a chiropractic school requiring a residence course of 18 months or 2200 school hours.

The subjects for examination include, physiology, symptomatology, hygiene, chiropractic orthopedy, histology, pathology, neurology and principles of chiropractic.

In addition to licensing those who have been practicing in Ohio illegally, prior to a set date, the bill would lower the reasonable chiropractic standard now demanded by the State Medical Board, of three years of nine months each in separate years, to an 18 months' course, three six-months' courses taken consecutively. In addition, the educational qualifications such as they are, would leave with the chiropractic board the power to evaluate supposed high school qualifications or the equivalent of a high school graduation.

From the standpoint of the public the most serious objection would be the legalizing of practitioners of insufficient qualifications who might with impunity treat infectious, contagious, venereal and other diseases of which they were not even cognizant, and would authorize the signing of death certificates and permit the filing of causes of death by men who have no knowledge or no means of ascertaining such cause.

*Morbidity statistics of the State Department of Health would be valueless—vital statistics a joke.*

The Ohio constitution provides that a bill to be initiated must bear the signatures of three per cent. of the voters and must be submitted to the legislature not less than ten days prior to the commencement of a session of the General Assembly. It is assumed that the early filing of this petition is for the purpose of propaganda and is an effort to secure the support of the incoming members of the legislature, each of whom is said to be already under pressure from this cult and its followers.

Right thinking legislators should not be stampeded by an apparently formidable petition as in fact it represents an insignificant part of the electorate, most of whom undoubtedly signed without knowing the content or effect of such a proposal. Indeed, a petition really has no other significance than an indication of the industry of the person or persons who circulated it. It is universally recognized that a petition with many signers can be secured for any outlandish proposal. People sign petitions not because they are in sympathy with the cause it espouses, but because it is easier to sign than to refuse, or for the simple purpose of being quit of the person who asks for the signature.

### Prohibition Prohibits What?

Following the enactment and enforcement of national prohibition early reports, largely tentative and perhaps more hopeful than accurate, led the public to believe that the system was operating successfully. Fewer crimes, less imprisonment, increased prosperity, multiplied savings accounts, disappearance of unemployment, and the revival of home life were all emphasized among the benefits anticipated.

The medical profession as a whole has consistently favored prohibition and has lent its aid consistently in the support and enforcement of the law.

With as great regret as any other group, the medical profession observes from day to day in the newspapers the apparent steady increase of misdemeanors and even crime attributable to evasion of the Volstead Act. This situation does not show any fallacy in the principle so much as a lack of enforcement or a failure in proper provision for enforcement.

Amazing yet characteristic are the figures for



September made public by the police court clerk in Columbus which show that arrests for drunkenness during that month totaled 208 while during the same period in 1919 there were but 50 similar offenders arraigned for trial. In addition to drunkenness charges, seven persons were arraigned during the recent period for operating automobiles while intoxicated.

Judging by all apparent facts there has been an immense increase in the manufacture and sale of nostrums of "alcoholic- tonic type" being used extensively for beverage purposes. A high official in police circles is authority for the statement that many of those recently arrested for drunkenness were in a state of coma or seriously ill from the effects of concoctions which are easily obtainable.

Undoubtedly the open saloon was a serious public evil and probably very few who had not already contracted the drink habit before prohibition became effective, are now seeking to assuage their thirst.

The important fact is that those who are consuming intoxicants masquerading as "medicines" and "tonics" suffer more serious ill effects even than the old time "topee."

Apparently a great many of the unscrupulous who saw a way to obtain easy money regardless of the unhappy toll in physical wrecks, have followed these simple directions:

"Take a dash of bitters, add sufficient alcohol to give an effective and unmistakable 'kick,' put in a small quantity of laxative drugs—but not sufficient to interfere with a few extra daily doses if one feels so inclined—carefully limit the claims on the trade package and just as carefully throw conservatism to the winds in advertising the stuff in the newspapers—and there is the making of a commercially successful 'patent medicine.'"

Isn't it possible that *The American Druggist* veered off on the wrong track when it suggested that the National Food and Drug Act be amended so as to delete the requirements of statement of alcoholic content on the label of drug products? Is the statement to be taken seriously that the intent of such commission is to "withhold the incentive to the uninformed and depraved to the use of drug preparations containing alcohol as a necessary constituent, for intoxicating purposes?"

It is a sure bet that the thirsty will soon learn of such nostrums just as they resorted to the use of Peruna and other concoctions for "intoxicating purposes" long before the Food and Drug Act required these products to declare their alcohol percentage.

The humor is also apparent in the further contention by the writer in *The American Druggist* who declares that "the declaration of the now unnecessary alcoholic content would permit the

inclusion of more important information on the label."

"With the appropriation for the Bureau of Chemistry reduced to a point where it is next to impotent in proceeding against fakes in medicine, and with some representatives in the drug trade insisting that the teeth of the Food and Drug Act be drawn, the nostrum interests must be looking forward to prosperous times," says the *Journal of the American Medical Association*.

In justice to the greater majority of druggists, it appears that the bulk of the nostrums is being dispensed by so-called soft drink vendors direct to the consumer or through recent saloon-keepers who have embarked in the drug business for the purpose of obtaining the necessary permit to deal in alcohol.

A step in the right direction has been taken by municipal councils in a number of Ohio cities through the enactment of ordinances tending to abate this evil. Another encouraging procedure was that of the United States District Court in Cincinnati recently when fourteen cases of patent medicine were seized and condemned and judgment rendered to the effect that the contents were mislabeled in that they were not of the curative value represented. The Federal attorneys and others who have acted in these matters should be commended. It is understood that evidence has been secured throughout the state concerning all kinds of patent or proprietary medicines which fail to meet the requirements of the Pure Food laws, and according to one official, the evidence covers almost every line of patent "sure cures" on the market.

It may be well to repeat that the medical profession as a whole thoroughly disapproves of any violation or evasion of the Federal or state law, particularly by any of its erring members, but that it does object to being made the "goat" of numerous would-be humorous writers who persist in the accusation that physicians through prescriptions, are responsible for the failure of the prohibition enforcement.

Let those who are directly interested in prohibition and in the protection of the "weak-willed" from harmful concoctions take the proper steps toward the elimination of illicit traffic.

\* \* \*

State Prohibition Director J. A. Shearer has either sent out or will mail in a few days blanks to all physicians who now hold permits to use or prescribe intoxicants, on which blanks application must be made immediately for a renewal of the present permits which expire on December 30. He calls the attention of physicians to the fact that on the expiration of the present permits no prescriptions can be issued or intoxicants secured for use in the new calendar year of 1921 until a renewed permit is issued and in the hands of the physician.

In view of the necessary delays incident to the

approval of applications and other formalities, application should be made at once in order to insure the receipt of new or renewed permits before January 1, 1921.

The prohibition director also emphasizes the fact that application for permit "to use" and "to prescribe" must be made on separate application blanks in case the physician desires permits for both purposes, although the same kind of blank (Form 1404) is used in either case.

Physicians who do not already hold permits and who desire to make application either to prescribe or to use intoxicants in the regular course of their practice during the coming year should write directly to John A. Shearer, Prohibition Director for Ohio, 36 West Gay Street, Columbus, for application blanks.

### State Medicine

Declaring that "a system of state doctors would be even more dangerous than a state religion," an interesting editorial on the above subject recently appeared in *The Akron Beacon Journal*.

It is indeed encouraging to see that a proportion of the public as represented by editorial thought in the lay newspapers, is beginning to realize not only the fallacy but the grave dangers in a state system of social medicine. As several angles of the questions are treated in an interesting fashion, the editorial is here reproduced:

In a recent issue of this paper was an excellent editorial of our contributing editor, Dr. MacAyeal. It stressed the folly of peoples in experimenting with institutions which all human experience has found sound, and it expresses a sad note of inquiry as to whether the human race will ever see the folly of tearing down the things for which man has yet found no substitute. This is peculiarly true just now in all countries, nor is it lacking in our own. Despite the failures of a thousand years there is everywhere prevalent a tendency to call back to power the old absolutism of the state and to have it take over the endeavors of the individual. In other words the disordered war psychology has turned its back upon the lessons of history and once more wants to get back to the idea that the state should do all things. Nor does this idea prevail only in regard to industrial life but it includes all of the fields of human endeavor.

Nowhere, perhaps, is this better seen than in the new craze that the state should not only take over our possessions but also the care of our bodies. There are now two bills before congress the object of which is to have the United States take final possession of its subjects in all that pertains to health and bodily welfare. A like bill was before the last session of the Ohio legislature. The net idea in these bills is to inaugurate a system of state insurance which shall extend

from the babe in arms to the senile ready for the grave. The state is to pay the bills, of course, out of money taken from the pocket of the taxpayer. It is to have state medical examination and inspection which in reality means the state is also to take over the doctors. Under this benevolent scheme the disciples of Galen would in time forfeit their proud estate and become in fact so many state plumbers and joiners and testers of humanity. It will pay us to consider the two inevitable results of such a system. Medical science in America leads the world because of the rewards that are offered to the man who by study and work becomes proficient in his profession. A Crile or a Mayo not only become world benefactors, but fame, money, and social prestige all await them as a fitting reward. Does any one suppose that Flexner and the long list of his fellow discoverers would have been increased had the state reduced them to the position of inspectors and human plumbers? Deny any man, even a scientist, the hope of an adequate reward for his labors and at once is removed pretty nearly all incentive to his labor. During the French revolution the state took over medicine as well as other things, and it was a notorious fact that the profession of medicine sank to a painfully low level even during those few years. Russia is trying to do the same thing now and we have it on good authority that the reputable doctors are escaping to other lands as fast as they can get away. It never has been nor could it be otherwise.

But the deluded people who expect the state to relieve them of their medical bills and at the same time to get free insurance have a sad awakening before them should they ever inaugurate this supreme folly. It was exactly this idea the present administration had in mind when it inaugurated soldier insurance. It forthwith inaugurated and set up a publication the purpose of which was to plant in the public mind the idea that the government could insure everybody for only a fraction of what they had to pay to the old line companies. There is now a deficit of two hundred and eighty millions of dollars in operating expenses although soldier insurance has in two years declined from over forty to less than seven billions. This deficit, of course, the people pay. It comes back to them in taxes and high costs all along the line. And yet this is only a foretaste of what would happen were any of these bills to pass which would set up in this country a system of state insurance and consequently a state control of doctors. However it is only a part of the prevailing hysteria to turn to the state for not only all things material but likewise for spiritual and moral guidance. It is, in fact, the most dangerous symptom of the times, and it is time for our people to stop and do some serious thinking. It will be a national calamity every time we concede to the state any



## Epidemic (Lethargic) Encephalitis\*

Ernest Scott, M. D., Charles W. McGavran, M. D., and James H. Warren, M. D., Columbus

Editor's Note.—From the report of Dr. Scott and his co-workers it is seen that epidemic encephalitis is a definite disease entity; that its symptoms are usually very positive and that its pathology is distinctive. Its occurrence following the great continental and intercontinental lines of travel and its widespread distribution readily places it among epidemic diseases, although as yet the exact means of dissemination and method of infection are not known. That the disease is of interest to the profession at large is evidenced by the fact that during the first five months of 1920, 66 deaths from epidemic encephalitis have been reported in the state of Ohio. Lethargic encephalitis may be readily confused with acute poliomyelitis, botulinus poisoning, African sleeping sickness and tubercular and syphilitic meningitis, hence the necessity for a close study of the symptoms in each case in order to make a correct differential diagnosis.

**D**URING the winter of 1916-17 Von Economo reported to the Vienna Society of Psychiatry a description of a series of cases to which he applied the name *encephalitis lethargica*. The discussion brought out by this paper revealed the fact that the number of such cases in the city was *very considerable*. During the year 1917 the disease appeared in northern Italy, Germany and France. On January 11th, 1918, the first case was reported in England, and by October of this same year Neal reports seeing similar cases in New York City, which, however, were not at first recognized as belonging to the group described above. Following the appearance of the disease in New York it has become widespread over the country, and has been reported from all sections of the United States.

### HISTORICAL CONSIDERATIONS

Bassoe, in reporting cases occurring in Chicago, gives a short historical sketch, in which he says that the disease is similar to that described as following the pandemic of influenza in 1889-90, then known as the mysterious *nona*, which appeared in northern Italy and Hungary and later in Germany and France. The disease at this time was mild and there were not enough fatalities to admit of extensive anatomical study. Still earlier accounts indicate that a similar disease was reported by Camerarius, who described a gripe epidemic in Tübingen in 1718, and mentioned sleeping sickness in connection with it. In 1768 Lepecq de la Cloture described a *coma sonolentum* following an epidemic of gripe. Netter, in 1919, reporting to the Paris Academy of Medicine, states that there was "some evidence in support of the view that the disease occurred at the end of the 17th and beginning of the 18th centuries in Germany, and more definite evidence that it occurred in upper Italy and Hungary in 1890, when the pandemic of influenza of that epoch was declining; very suggestive cases occurred in nearly all the countries of Europe and in the United States in the spring of 1895."

### RELATIONSHIP WITH THE INCIDENCE OF INFLUENZA

The exact relationship existing between this

disease and influenza has created considerable discussion, and the matter has not as yet been fully determined. The preponderance of opinion, however, seems to be that there is a distinct relationship between the two diseases. Historically, cases of these diseases have been reported as following epidemics of influenza or gripe. Bassoe states that "the etiological relationship of the diseases rests upon this coincidence of the epidemics", and further states that in none of the cases reported by him has there been any definite preceding influenza. Other authors, however, assert that the patients give history of more or less definite influenzal attacks. Neal states that the majority of patients give history of influenza, followed at varying times by headache and apathy, usually accompanied by fever. Tucker affirms that the history of influenza in these cases is so striking that he believes "that the encephalitis lethargica is either a manifestation of recurrence of influenza or, in certain cases, an expression of influenza per se." Cruikshank, again, states that "the disease bears the same epidemiological relation to influenza as do epidemics of septic pneumonia, gastro-intestinal illness, and other maladies described as preceding or following pandemic influenza." Vaughn, in commenting on the relationship of these diseases, remarks that "the natural conclusion to draw is that a large number, if not the majority, of the people living in the midst of an epidemic of influenza are infected, and that the virus, without causing recognizable acute symptoms, may, after weeks or months, produce the changes in the brain observed in encephalitis lethargica." Barker, Cross and Irwin, after a careful discussion of the relationship of the diseases, suggest that there are three possibilities: (1) That the virus of influenza is the cause of encephalitis; (2) That influenzal infection predisposes to infection with the virus of encephalitis; (3) That the cosmic influences which determine the occurrence of epidemic influenza also determine the cause of epidemic encephalitis.

### VARIATIONS OF TYPE

Following these rather general investigations of the diseases, Clelland and Campbell, in describing an epidemic of encephalo-myelitis which

\*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

occurred in certain portions of Australia during 1917-18, maintain that, because of the preponderance of the signs of cerebrospinal irritation, the high mortality (70 per cent.), the infrequency of cranial paralysis, and the widespread changes in the nervous system without gross lesion, and above all the susceptibility of the horse, sheep, calf, and monkey to brain emulsion made from those dead of the disease, their cases are sufficiently differentiated from encephalitis lethargica and from poliomyelitis to be classed as a distinct disease, and suggest that the three diseases may be due to mutants of a single virus.

Considering the unusual features of these cases recorded by Clelland and Campbell and the findings of globoid bodies by Wiesner and by Wilson, and the apparent similarity existing between poliomyelitis and encephalitis, Barker, Cross and Irwin suggest that the diseases may be due to special strains of a single organism, just as we now recognize Types I, II, and III of the pneumococcus and Types Para A and Para B of the paratyphoid bacillus.

#### ISOLATION OF THE SPECIFIC ORGANISM

There are at present appearing in the literature records of attempts to find and isolate the specific organism causing the disease. Morris and Crump state that they have obtained, from six consecutive cases of this disease, cultures of a non-motile coccus, which in the older culture attains much the size of the staphylococcus. This organism stains readily and is gram positive. There is a mild agglutinative reaction between cultures of this organism and the serum of patients in the height of the disease and no reaction in normal individuals. This organism, according to the claims of these writers, when injected subdurally into rabbits produces a fatal lethargic state, and the specific organism may be secured from the brain of the dead rabbits. Wiesener, in Vienna, and Wilson, in England, report the finding of a globoid, diplococcal organism closely resembling that isolated by Flexner and Nogochi in poliomyelitis. More recently Lowe and Strauss report the finding of a filtrable virus from the naso-pharyngeal washings of patients who are suffering from or who have died of the disease, which, upon injection into rabbits, has given positive results in 75 per cent. of cases; that the organism has been recovered from 11 of 17 cases examined; and that the method has been of distinct service in diagnosis in certain cases.

#### THE SYMPTOMS OF LETHARGIC ENCEPHALITIS

The symptoms of lethargic encephalitis are variable. When one considers that the pathology of the disease is found in the brain and medulla, it becomes evident that the symptoms are dependent on the portion of the central nervous system involved. For example, the nucleus of the oculo-motor nerve is the one most often in-

involved, hence the symptom of paralysis of this nerve. In general, there seems to be a *prodromal stage* in which the patient complains of drowsiness and asthenia. These symptoms increase in severity and may be accompanied by headache, vertigo, photophobia, blurred vision, or diplopia. There is often a ptosis of the eyelids, either unilateral or bilateral, the face becomes expressionless or mask-like, and there is difficulty in articulation, the voice becoming nasal in character. The drowsiness increases into a *stuporous state* and oftentimes this is followed by *real coma*. In contrast to the above, the onset may be sudden, often ushered in by a severe headache, nausea and vomiting. Delirium is not uncommon but is usually nocturnal; choreic-like movements of face and extremities may be present. While the above symptoms are found in typical cases, there are probably many ambulatory cases with abortive symptoms that go unrecognized.

In the early stage there is generally a rise in temperature, although this may not always be recorded. The common range is from 100 to 102 degrees. The blood shows a very slight increase in leucocytes, the average count being 10,000. Blood cultures are uniformly negative. Alexander and Allen report that in 79 spinal fluids 2 were slightly cloudy, 42 showed less than 20 cells, while 3 had counts of over a hundred, bacteriological examination being negative. Barker, Cross and Irvin, also Wilson, report cases showing approximately the same symptomology and rather indefinite laboratory findings. J. E. Monger, during the year 1919, secured clinical data on 23 out of 34 deaths in Ohio reported as occurring from epidemic encephalitis. The reports show deaths occurred in 19 counties of the state and that there were not more than 2 deaths in any one county. The age varied from 1 to 82 years; history of influenza in 18 cases; delirium present in 8, apathy in 12 and somnolence in all. Of the eye symptoms, internal strabismus and ptosis in all cases, pupils dilated in 2, contracted in 2, unequal in 1. For the first five months of 1920, 66 deaths from epidemic encephalitis have been reported in the State of Ohio. The treatment of the disease is unsatisfactory, it being treated symptomatically.

#### ILLUSTRATIVE CASE REPORTS

The following case records illustrate many of the above mentioned symptoms. Case II deserves especial attention. This case was complicated by having a glycosuria. There was no previous history pointing toward this symptom and subsequent history shows there is now no tendency toward a lowered carbohydrate tolerance. In view of the fact that the pathology of the disease occurs in the medulla, it is probable that the lesion involved the *sugar puncture point* of Claude Bernard. Experimentally a puncture of this area causes a glycosuria, while in the present case the irritation could have been caused by the



round cell infiltration which is the peculiar pathology of the disease. As the other nervous symptoms improved, the tolerance of carbohydrates increased until at the present date there does not seem to be the least tendency toward a glycosuria.

CASE I.—N. M., female, single, age 33. Consultation, Dr. M. Complaint, diplopia, drowsiness, headache, and nervousness. No history of having had influenza. One morning was troubled with double vision; the day previous had a severe headache accompanied by nausea. Eyes were examined but pronounced negative. Physical examination revealed nothing remarkable; temperature normal; pulse 90; urine negative; blood count, leucocytes, 8,000; polys, 68, lymphocytes, 30; large mononuclears, 2. On the day following examination patient had a temperature of 100° and felt worse; in 48 hours became stuporous, but when aroused said she felt well and had no pain. In the following days the stupor increased, accompanied by a low, muttering delirium, carphology being present. Neurological examination was negative. Patient could be aroused, but would fall asleep while talking. Patient had a temperature for 2 weeks. Subsequent history: Patient made a very slow recovery, but after 7 months had returned almost to her normal state.

CASE II.—G. F., female, single, age 28. Patient had been sick for 10 days previous. Started one morning by complaining of headache, dizziness and anorexia; following day had diplopia and blurred vision. Examined by ophthalmologist, who reported that patient had a bilateral ptosis and a distinct squint. Patient is said to have had a slight rise in temperature and also to have had a mild delirium for two nights. Patient was somnolent. Examination of urine was made and sugar found. Our physical examination made on the tenth day of the disease revealed a definite bilateral ptosis of the upper eyelids, pupils equal and reacting promptly to light and distance; face expressionless and mask-like; speech slow and spoken in a monotone; all reflexes normal, no rigidity. Examination of urine, 24 hour specimen, 550 cc.; sp. g., 1024; albumen, negative; sugar present 0.41 per cent.; no acetone; no diacetic acid. Blood count; leucocytes, 9800; poly., 72; lymph., 26; large mono., 2. Blood sugar, 0.135 (Epstein). Wassermann test, negative. Subsequent history: Patient was placed on a restricted diet, which was increased until a tolerance of 203 gm. carbohydrate, 63 gm. protein, and 54 gm. fat was reached. At this level sugar would break through at indefinite intervals, apparently without relation to food intake. With the improvement of the nervous symptoms there was an increase in carbohydrate tolerance. At the end of six months the patient is almost back to normal health, with no tendency toward a lowered carbohydrate tolerance.

CASE III.—A. F., male, age 50. Consultation,

Dr. V. Two weeks previously patient complained of a pain in the back; following this was confused and is now somnolent day and night. About 4 days ago awoke with right side of face paralyzed. Other than this paralysis neither examination nor clinicals revealed anything remarkable. This patient gradually improved, the drowsiness disappeared and the facial paralysis is greatly improved.

CASE IV.—W. H. R., age 47, male. Consultation, Dr. H. Complaint, severe frontal headache extending back to occiput. Developed a severe frontal headache while on a train the night before; vomited several times; no other complaints. Examination showed pupils to be equal, contracted (morphine) and not reacting to light; otherwise examination was negative. In the next 24 hours patient became delirious, followed by a stuporous condition; developed ptosis of right eyelid and a divergent squint; pupils unequal. Blood count shows 14,500 whites, polys, 78; lympho., 19; large mono., 1; eosin., 2. Wassermann test, negative. Patient was removed to hospital. About 2 weeks later developed paralysis of external rectus muscle of left eye. At the end of 4 months patient was greatly improved, no evidence of paralysis remaining.

CASE V.—J. W., age 41, female. Consultation, Dr. O. This patient was seen in consultation 5 months after onset. Onset was acute, with chills, fever, headache and dizziness. Since that time, (5 months ago) patient has been having pain in head and extremities, is drowsy both day and night, photophobia is present, no paralysis. All clinical examinations, including Wassermann test, were negative. The history of the case was typical of encephalitis. The subsequent history is unknown.

CASE VI.—E. K. S., female, colored, age 37. Complaint, weakness, dizziness, headache, diplopia and blurred vision. Patient gives no history of having had influenza. On the evening of November 9 felt tired; the next day was dizzy and had a severe headache. The following day developed diplopia and presented herself for examination, which revealed noticeable drooping of eyelids, also an external squint of right eye; pupils were equal and reacted to light and distance. Patient was sluggish and responded slowly to questions. Temperature, 101°; respiration 24; pulse 120. Blood count, whites, 8,000; polys., 70; lymph., 25; monos., 4; eosin., 1. For the next three days symptoms increased in severity and patient was removed to hospital. At this time was in stuporous condition, low, muttering delirium, and was constantly picking at the bed clothes. This condition grew worse until patient passed into coma from which she could not be aroused. There was a retention of urine; no rigidity nor opisthotonos. Patient died on 4th day in hospital. Blood count, whites 10,700; poly., 93; lymph., 5; mono., 2. Spinal fluid was negative; Widal test, negative.

Autopsy held a few hours after death and this material forms the basis of the pathological report.

POST MORTEM EXAMINATION ABSTRACT OF CASE VI.—The only unusual feature shown on the general examination is that of a rather swollen condition of the upper eyelids. The pupils are somewhat dilated and are equal. Examination of the thoracic and peritoneal cavities reveals no lesion of consequence.

Examination of the brain shows the vessels of the pia mater to be somewhat congested, but shows no evidence of oedema or of any inflammatory exudate. On section through the hemisphere of the brain numerous small bleeding points are seen, which are especially numerous in the region of the corpus striatum and in the cortical substance in the roof of the lateral ventricle, as well as in the pons and medulla. These spots are due to the escape of blood from the congested vessels and not to a true hemorrhagic exudation, for by gently washing the cut surface of the brain with running water or with a cotton sponge the blood could be entirely removed, leaving the tissue of a uniformly white color. During the examination at the autopsy table there were small areas in the thalamus and in the pons that seemed softer than the other portions. Such areas, however, could not be detected after fixation in formalin nor could they be determined microscopically in sections taken from these areas.

These findings correspond rather closely with the findings in other reported cases. The majority of such cases in the literature up to this time have shown a congestion with some oedema of the brain and meninges, with minute hemorrhages, most numerous in the brain stem and basal ganglia. In none of the cases has there been any evidence of definite meningeal exudate.

MICROSCOPICAL.—Bassoe and Hassin, Neal, Calhoun, Tucker, and others have made careful examination of the brain and cords removed from cases of this disease. Their reports show that the most striking lesion is the perivascular infiltration or *sleeving* of the blood vessels in the basal ganglia, pons and medulla. Some of these authors report the degeneration of certain of the ganglionic cells in the cranial ganglia, with moderate oedema of the brain substance, and in certain cases a localized mononuclear accumulation in some portions of the brain stem. In some cases there is an evident increase in the neuroglia cells. The meninges are uniformly recorded as being congested, with a somewhat definite perivascular infiltration. The cells composing the infiltration about the blood vessels are recorded as being lymphocytes, plasma cells, mononuclear cells, polyblasts and rod cells. The case reported by Calhoun presents also, in the perivascular spaces, numerous homogeneous bodies whose presence has not as yet been accounted for. In summing up the histological-pathology, Josephine

Neal divides the lesions in the brain into four types:

(1) The infiltration of lymphocytes and plasma cells about the smaller vessels.

(2) Foci of interstitial and parenchymatous infiltration of round cells, in which the neuroglia may take part.



Figure 1. Microphotograph, 16 mm. objective. Showing the perivascular infiltration about the vessels of the pons and an increase in the neuroglia cells.

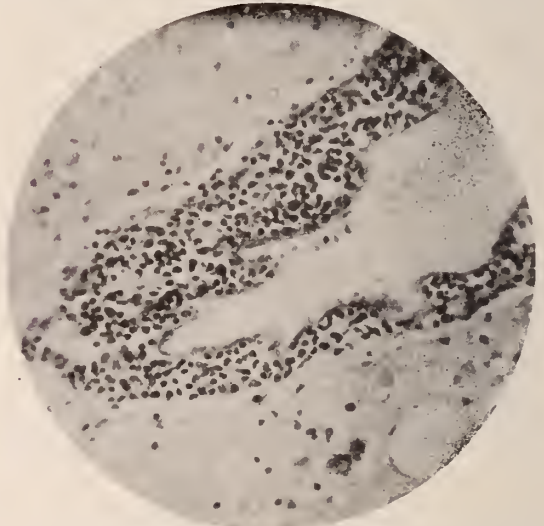


Figure 2. Microphotograph, 4 mm. objective. Showing the lymphocytes, plasma cells and mononuclear cells grouped about a blood vessel of the pons.

(3) Lesions of the nerve cells.

(4) Foci of perivascular hemorrhage.

Calhoun asserts that the infiltration of the adventitial and perivascular spaces with lymphocytes and plasma cells occurring in the brain stem and about the cranial nuclei may be considered pathognomonic of the disease.

In examining sections from the brain removed from the case under discussion, sections from the basal ganglia, pons and medulla show a marked



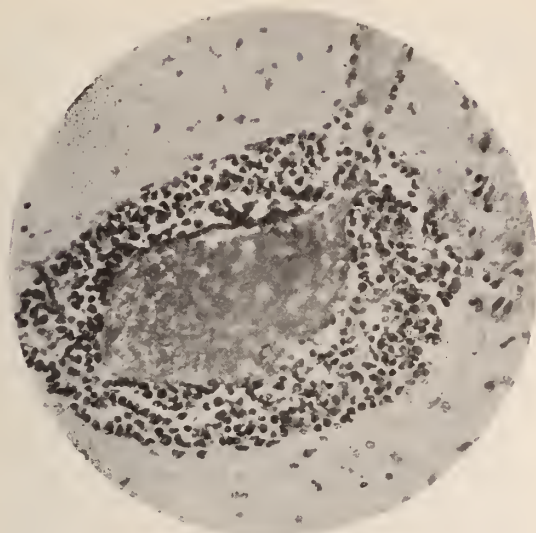


Figure 3. Microphotograph, 4 mm. objective. Similar to Figure 2, except that the vessel is in a section of the mid brain.

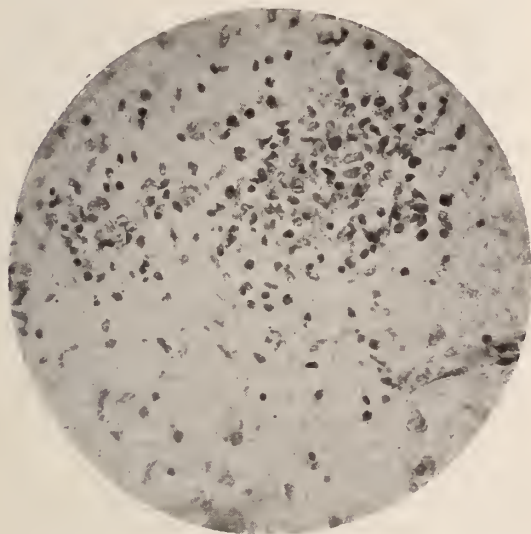


Figure 4. Microphotograph. Showing the accumulation of mononuclear cells and lymphocytes in the substance of the pons.

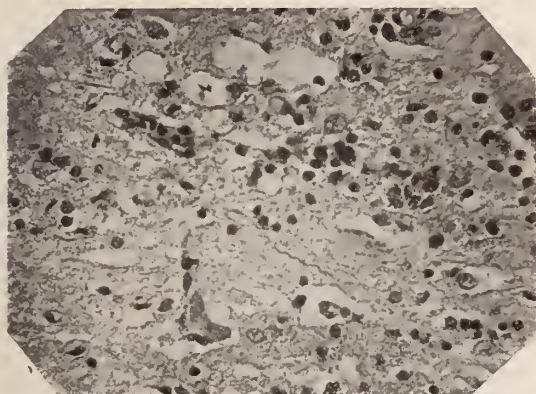


Figure 5. Microphotograph. Showing the neuronophagia of certain of the ganglion cells of the nucleus of the oculomotor nerve.

perivascular infiltration, consisting of lymphocytes, plasma and mononuclear cells. This infiltration is so definite as to form a very striking microscopical picture. In one area in the upper portion of the pons accumulations of mononuclear cells are encountered, while within the nucleus of the oculomotor nerve certain of the ganglion cells have apparently undergone partial degeneration, and about these damaged cells mononuclear cells have accumulated (neuronophagia), forming a picture rather closely resembling that occurring about the ganglionic cells of the anterior horn so commonly encountered in cases of acute poliomyelitis.

In some of the reported cases definite involvement of the spinal cord, especially of the gray matter, has been recorded, these changes varying from those of a slight perivascular infiltration to a more or less extensive degeneration of the ganglionic cells of the anterior horn. In other reported cases the spinal cord has been apparently normal. In the present case the cervical cord alone has been examined, but there are no definite lesions within the substance of this portion of the cord which in any way resemble the lesions found in the medulla and basal ganglion.

During the earlier portion of the period of the epidemic in England the cases were thought to be those of food poisoning, and the bacillus botulinus was suspected as the etiological agent. From the standpoint of symptoms alone, the two diseases are quite similar. Those of botulinus, according to Dickson, and recently confirmed by Armstrong, Storey and Scott, in reporting the epidemic of botulinus poisoning at Canton, Ohio, are fatigue with weakness peculiar and extreme, severe head pain, involvement of the third cranial nerves, with loss of light reflexes and diplopia, difficulty in swallowing, usually a rapid pulse and normal or subnormal temperature. However, in examining the tissues from these two conditions, Marinesco has been able to demonstrate definitely that the tissues from botulinus poisoning are entirely non-inflammatory, while those of encephalitis are of a true inflammatory nature. This finding of Marinesco's the writer has been able to confirm in the examination of the numerous animals used in the experimental work during the recent investigation of the cases of botulinus poisoning at Canton, Ohio, and the case of encephalitis reported in the present paper.

The symptoms presented by cases of epidemic encephalitis also bear a rather striking resemblance to certain cases of acute poliomyelitis, the symptoms so closely resembling those of the encephalitic forms of poliomyelitis that epidemiological studies were necessary to differentiate the diseases.

Encephalitic cases may also be confused with the African sleeping sickness, produced by the trypanosome *Gambiense*, some authors reporting that these two diseases so closely resemble each other, both clinically and microscopically, that

they cannot be differentiated. Sleeping sickness, however, according to Bassoe and Hassin, is of a more chronic nature, and there is apt to be a more definite formation of fibrous tissue in the meninges and the brain substance.

Tubercular and syphilitic meningitis are also difficult to distinguish from some cases of encephalitis, Neal stating that the clinical differentiation between encephalitis and tubercular meningitis is, in some cases, most difficult.

#### CONCLUSIONS

From the above report it is seen that epidemic encephalitis is a definite disease entity; that its symptoms are usually very positive, and that its pathology is distinctive. Its occurrence following the great continental and intercontinental lines of travel and widespread distribution readily place it among epidemic diseases, although as yet the exact means of dissemination and method of infection are not known.

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PROTESTANT HOSPITAL.

## The Present Day Nursing Problem in Obstetrical Practice\*

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**Editor's Note.**—There is no doubt, as Dr. Goodman contends in his report, that better nursing in obstetrical practice is one of the vital problems of public health affecting both the welfare of the parturient mother and her child to say nothing of the obstetrician. Apparently most graduate nurses are drawn by the lure of surgery and the operating-room. They think little of the necessity of good nursing in the obstetrical department or of the fact that precious lives may be saved there as well as in the surgical clinics. However, it would seem that the remuneration now demanded by graduate nurses places their services beyond the reach of the average family of limited and moderate income. Hence the existing emergency that seems to require the training of obstetrical nurses, either in existing schools or in schools organized for that special purpose. These obstetrical attendants need not be taught to be midwives or pseudo obstetricians. Dr. Goodman details the limitations of their average requirements, and if these can be met a great deal will have been done to solve the nursing problem in obstetrical practice.

**A**S the subject of nursing in obstetric practice formed the major portion of the report of the Committee on Medical Sociology, it was deemed expedient that this matter be presented to the Section on Obstetrics in order that it might be properly discussed and suitable suggestions for betterment offered.

#### GENERAL CONSIDERATIONS

I wish to offer several fundamental facts as a basis for the consideration of "The Present Day Nursing Problems in Obstetrical Practice." I

\*A Report of the Committee on Sociology read by its Chairman before the Section on Obstetrics and Pediatrics, of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

think you will accept these without any reservation.

*First*, that if the world is to survive women must continue to bear children.

*Second*, that if women do bear children they must have competent nursing attention in co-operation with skillful obstetrical attendance.

*Third*, that none of us expect to live to see the day when all parturient women can or will go to a good hospital for delivery.

*Fourth*, that there will always be those patients who cannot pay large fees for obstetrical services or exorbitant wages for nursing care. This does not apply to the charity class but to the family of limited or fixed moderate income.



Presuming that you have accepted the above as reasonable, let us see how we are concerned with this problem and try to formulate some plan or system for dealing with the same.

#### OBSTETRICAL MORBIDITY AND MORTALITY

Let us begin the consideration of this subject by looking, for a moment, into the matter of obstetrical morbidity and mortality. In a recent issue of the *Journal of the American Medical Association* (Vol. 1, No. 8, Page 523), Dr. C. Henry Davis, of Milwaukee, presents a startling array of statistics on maternal morbidity and mortality. I shall quote several paragraphs from this most interesting article. He says, *"There is a general impression among physicians that there has been a great improvement in maternal mortality during the past half century. This impression is based on the present favorable maternal mortality records in hospital and dispensary services, and not on a comparison of mortality and birth statistics."*

"In 1917, Grace L. Meigs made a careful study of maternal mortality from all conditions connected with childbirth from the available records of the United States and other countries. In answer to the question, is the death rate from child-birth falling? she says:

*"According to the evidence available, these death rates are not decreasing. During the twenty-three years ending in 1913, in this country no definite decrease in the death rate from the diseases caused by pregnancy and confinement can be demonstrated; nor can any decrease in the death rate from puerperal septicemia be shown. In order to make possible a comparison of the death rate from these causes for fifteen foreign countries with those for the United States, an average rate has been computed for the years 1900 to 1910 for each of the countries, using the same method as that in use in the United States. When the sixteen countries studied are arranged in order, with the one having the lowest rate first, the death registration area of the United States stands fourteenth on the list. Only two countries, Spain and Switzerland, have higher rates; many of the countries, however, show rates differing but little from that of the United States."*

"During the past thirty years, deaths from many diseases have been reduced to a fraction of their former toll. The deaths from tuberculosis per hundred thousand of population have dropped from 252 to 145.8; pneumonia from 186.9 to 82.9; diphtheria and croup from 97.8 to 15.7; diarrhoea and enteritis under two years, from 139.1 to 59.5; typhoid fever from 46.3 to 12.4. The death rate from diseases caused by pregnancy and the puerperal state in 1890 was 15.3, while in 1915 it was 15.2. The maternal mortality rate in 1916 was 16.3 per hundred thousand of population.

"Few realize that for all women of child-

bearing age, *childbirth is the second greatest cause of death.* For the year 1915 in the death registration area of the United States, there were, among women aged 15 to 45 years, 29,200 deaths from tuberculosis; 10,134 from childbirth, of which 4,173 were from puerperal septicaemia; 8,766 from the various circulatory disturbances; 5,549 from pneumonia; 5,424 from cancer and other malignant tumors; while for all these ages syphilis was reported as the cause of death 647 times and gonorrhoea 174 times.

"The examination of 10,000 family histories, as given by applicants for life insurance, would seem to indicate that among the class of men who have applied for life insurance during recent years, maternity has been a cause of death in more families than either tuberculosis or malignant tumors."

Is this collection of statistics not startling? Does it not behoove us to rouse ourselves and see if we cannot better the conditions which contribute to such a state of affairs? Such improvement is the motive of this report. The consideration of the nursing problem is but a single step toward the goal.

#### NURSES' OBJECTIONS TO OBSTETRICAL WORK

A majority of graduate nurses will not accept employment for obstetrical service. Some few will engage to care for this class of patients if delivery is made in a hospital, but for the patient who cannot or will not go to a hospital it is almost impossible to secure a competent nurse. I am not speaking from a personal standpoint, as most of my work is in consultation. I am interested in this matter from the standpoint of the general practitioner and therefore from the standpoint of *better obstetrics.*

One of the main reasons that so few nurses will accept this work is that they are not impressed with the great importance of the service and the good that can be accomplished by conscientious care of this class of patients.

I have repeatedly heard pupil nurses, but recently out of probationer's garb, emphatically declare that they never intended to take an obstetrical case. They are but repeating the expressions of the older nurses. It is at this time that they should be impressed with the importance of the work and should not be allowed to set their minds against this service before they are mature enough in training to know what they are thinking about. I try to impress them with the fact that nearly all surgery is now performed in hospitals with pupil nurses in attendance; that typhoid nursing will soon be relegated to ancient history; that pneumonia and the various zymotic diseases will be either prevented or quickly cured by the use of sera; that contagious diseases will be treated in special hospitals. When the League of Nations gets into working order there will be no more war. Then what will be left for the nurses to do? Obstetrics

is a large field of endeavor and I think it a grave mistake if we allow the nursing profession to cast aside this service without some effort on our part to show them the great good that can be accomplished by them.

The average trained nurse, graduated from our hospitals today, is a splendid surgical assistant. She can make dressings, assist in operations and carry out post-operative orders better than the average medical man. For our surgical patients she is invaluable and many patients owe their lives to a good nurse as much as to the surgeon. For medical cases, our nurses are fairly well trained, considering the fact that most of our hospitals are really surgical infirmaries.

But what about the *obstetrical nurse*? One rarely hears a nurse say that she is an expert obstetrical nurse. There are a number of untrained women who claim to be obstetrical nurses. These I have found to be more of a nuisance than a help. I must exclude from the above a few non-graduates who are excellent obstetrical nurses.

I have no hesitancy in saying that the average nurse, graduated from our local hospitals, is not a good obstetrical nurse. This is due to several causes. The pupil nurse does not consider obstetrics as spectacular as surgery and she does not take the proper interest in the work. Many of them lack the peculiar womanly instincts that draw women to this service. In some schools of nursing, the lectures are so primitive that the pupils get nothing out of them; in others, the teaching is so technical that the girls fail to grasp the subject or, on the other hand, they become pseudo-obstetricians and ask so much for their services that there is little or nothing left for the practitioner although he is willing to wait a long time before he even asks for his fee. Of course, no one will question me when I say that this is an era of high prices. But as I said in the beginning, there are a few people who did not build camps nor sell supplies to the government during the war. *I have recently been informed that obstetrical nursing service, in Columbus, is to cost seven dollars per day and that, in the near future, that wage will be for twelve hours only.* I have no criticism to offer about this charge as I suppose that nurses have as good a right to "get theirs" as other people. But the point is: What are we going to do about it and how are we going to provide nurses for your obstetrical patients, whose income does not pay an excess profit tax? Do we need nurses to reduce the maternal mortality? Most assuredly we do.

#### THE SOLUTION OF THE PROBLEM

I have thought about this matter for a long time. I have discussed the subject with the heads of various training schools. We must have better obstetrics and we cannot have better

obstetrics unless we have competent nursing care for the mother.

*The solution of the problem seems to me to be the establishment of schools, or courses in existing schools, for the training of obstetrical attendants.* Let them call themselves obstetrical nurses, if they choose, but we will designate them as *obstetrical attendants* or some other euphonious name.

In view of the fact that the average nurse is a poor obstetrical nurse and that there is enough surgery being done in every small town by men who have had a few weeks P. G. course, there will not be any lack of work for the regular graduates.

*These obstetrical attendants need not be taught many of the branches usually taught in nursing schools because they will be employed for obstetrical work only.* The course of instruction need not last longer than one year, if that long. If there are not enough boards sitting in the State House let another be appointed to register these attendants.

There are many hospitals which do not have the bed requirements for state registration. These hospitals could do a great work in training these attendants. I believe that they would have little trouble in securing good girls for their schools. These girls need not be high school or college graduates. I have found a large number of women who could make a bed so that the patient was comfortable; who could comb a woman's hair; bathe a baby; keep the room orderly and be polite to the domestic servants, and they never had any training except that secured by helping mother. There are a good many college graduates who never learn these little things.

#### SOME THINGS TO BE TAUGHT

There are some things that these *attendants* should be taught and which I consider fundamentally important. Naturally, they should be taught tact, loyalty to the attending doctor, politeness (usually learned at home), kindness to patients, cleanliness, willingness to assume any *emergency* duty in the home, and the danger of talking too much. Above all, they should be taught to show some *human sympathy* to the parturient woman and be impressed with the fact that this is one of the most important attributes of a good obstetrical attendant. Teach them that they are to care for women at the most important and trying time of their lives, and that the peculiar bond of feeling between woman and woman is here most evident and necessary. That is why we need *women* for obstetrical nurses. Teach them that they must not relate all their bad cases nor tell any one that they are working for humanity rather than for a wage. Teach them that their usefulness depends upon their ability to get along with the servants in the house.

Attendants should be given an elementary idea of the anatomy and physiology of the female re-



productive organs. They should also have some idea of the appearance of the vulva when affected by lewd diseases.

Asepsis and antisepsis should be drilled into them at every step of their training. It is well to practice what you preach when giving instruction. They should have at least three approved methods of cleansing the hands before attending at delivery. It is not necessary that they be given an advanced course in bacteriology. They should be taught the value of a bar of soap and a rice straw brush. They should know how to cleanse soup bowls and other dishes and pans which might be needed in "setting up" for a delivery at a home. Even the homes of the rich will not have all the utensils which trained nurses become accustomed to in the hospitals.

The obstetrical attendants should have an idea of what the pregnant woman ordinarily prepares in anticipation of confinement and should know the use of these articles. They ought to know what to do when they arrive at the home at the time of confinement; what to do with the children; how to arrange the room; how to arrange the bed with relation to light, heat and ventilation, open fires and doors; the means of securing water and other things needed in the delivery room; how to make the patient comfortable and confident while awaiting the supreme moment. They should know how to arrange the table for the accoucheur but need not know which blade of the forceps to hand him if they have tact enough to win the confidence of the patient.

It is important that they know how to use a rubber catheter and the method of preparing the vulva before using the instrument. It is not at all necessary that they be able to anticipate every whim and wish and hobby of every physician with whom they come in professional contact.

It is very important that we teach them the care of the puerperal woman. They must be instructed in the care of the breasts (a subject too often neglected in the regular training schools) and the care of the eyes, ears and nose of the new born. They need not be taught the keeping of an approved chart. They should be taught to use the thermometer, and perhaps, the use of the hypodermic syringe. The *average* hospital chart contains little information except the name and address of the patient and notes that the patient had a bath and that the doctor called. It would be well if nurses would make careful notes about the lochia, breasts, amount of food taken by the babe and such details, but I have long ago given up this phase of the chart subject. As long as the temperature and pulse are normal and the patient happy I try to be content.

These attendants need not be taught how to control postpartum hemorrhage except that they know how to massage the womb. They are not nurses but just attendants. However, they should be taught to recognize a convulsion and to put something between the teeth to avoid the biting

of the tongue. They should call your attention to eruptions, sores and discharges but need not know what to do in order to relieve these conditions. That is your own job. Above all, impress upon them that they *must carry out orders as you leave them and call upon you to make any changes in these orders.*

If we can train a large number of good, bright girls, with average horse sense and ordinary education, in schools adapted to this purpose, we will do a great service to the public and go a long way toward the improvement in obstetrics so earnestly sought.

#### CONCLUSIONS

We are not treading upon the toes of any of the existing schools nor are we taking away any income from the regular trained nurses. They do not want our obstetric cases and the surgeons have plenty of work for them. *We must have nursing service for parturient women.* The public will thank us for educating these *obstetrical attendants* because their work will be their specialty and their wages will be within the reach of the average patient. Thus, more people will engage competent nursing care; the obstetrician will have less trouble securing help; obstetrical nursing among the non-rich will be taken from the hands of ignorant old ladies and sepsis will be lessened. Thus, the nursing profession, the medical profession, and our very necessary ally, the PUBLIC, will all be happy. This scheme is bound to come. The regents of the State of New York have already adopted this idea and will give it a very thorough trial, in spite of the opposition of the trained nurse. Can Ohio afford to lag behind?

121 SOUTH SIXTH STREET.

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#### NEW BOOKS

*A Short History of Nursing*, from the earliest times to the present day, by Lavinia L. Dock, R. N., secretary, International Council of Nurses, in collaboration with Isabel Maitland Stewart, A. M., R. N., Assistant Professor, Department of Nursing and Health, Teachers College, Columbia University, New York. G. P. Putnam's Sons, 2 West Forty-fifth Street, New York. Price \$3.50.

*Industrial Nursing* for Industrial, Public Health, and Pupil Nurses, and for Employers of Labor. By Florence Swift Wright, R. N., Bureau of Child Hygiene, New Jersey State Department of Health; formerly Secretary of the Benefit Association of the Employees of John Wanamaker, New York; and formerly in charge of Industrial Nursing for both the Cheney Brothers Silk Mills and the Clark Thread Company. The Macmillan Company, New York.

*Diseases of Nutrition and Infant Feeding* by John Lovett Morse, A. M., M. D., Professor of Pediatrics, Harvard Medical School, and Fritz B. Talbot, A. B., M. D., Instructor in Pediatrics, Harvard Medical School. Second Edition, revised. The Macmillan Company, New York.

## The Red Cross Public Health Nursing Program\*

V. Lota Lorimer, R. N., Cleveland

Director of Public Health Nursing, Lake Division, A. R. C.

Editor's Note.—In her brief communication Miss Lorimer details the establishment of the Red Cross public health nursing service, the standards required of nurses entering the work, the methods of cooperating with communities in originating such nursing service and the way it is supervised.

THE Red Cross Public Health Nursing Program was started in 1912 under the Civilian Relief Department and was known at that time as Rural Nursing, later being changed to Red Cross Town and Country Nursing Service. This service was continued for a period of six years, until the spring of 1918, at which time it was placed under the Department of Nursing. Just a short time preceding this date, the United States Public Health Service had established, in connection with the American Red Cross, sanitary zones surrounding the camps in this country. The name was again changed to that under which we are operating at the present time, the Red Cross Public Health Nursing Service.

### ESTABLISHMENT OF RED CROSS PUBLIC HEALTH NURSING SERVICE

The details of the setting up of this work were very carefully gone into, being based upon the experience of the work that had been done in the decades preceding, so that in January, 1919, the Division office sent out in multigraphed form a copy of the instructions which we speak of as A-700, to each chapter in Lake Division. In March, 1919, the printed material began to come from the press and we were provided then with forms A-700 and A-701 which give the entire set up of the Public Health Nursing Program of the American Red Cross in detailed form. The work which was started at this time grew very rapidly. At the close of the six years in which the Red Cross Town and Country Nursing Service had been carried on we had ninety-five nurses; in December, 1919, six months after the establishment of the work under the present plan, we had five hundred and twenty-one nurses in the field.

### ORGANIZATION OF THE SERVICE IN THE LOCAL COMMUNITY

Now, just a word as to the organization of the service in the local community. In reading the instructions, you will find that the Chapter is given very definite directions in the matter of appointing a Chapter Committee on Nursing Activities. This is the official point of contact between the Division Department of Nursing and the local Chapter in the field. This committee is our only point of contact and therefore is absolutely necessary before we can consider the

establishment of the service. You will find that this committee, if properly understood in all its workings, will prove a very great help to the development of public health nursing work in any community.

After the Chapter Committee has been formed and a decision has been made to take up Public Health Nursing work in that community, the committee makes application to the Department of Nursing at Division Headquarters. It should be understood at this point that in those instructions each Chapter is definitely told that if there is already sufficient public health nursing service in the community the Chapter is not to attempt to set up such a service. There may be some things which that Chapter could do to assist the other agencies already in the field, but whenever possible agencies already in the field should maintain the service without the assistance of the Red Cross Chapter.

### NURSING STANDARDS

It is the duty of the Department of Nursing to make sure of the credentials of the nurse, that she meets the minimum standard which has been determined as necessary before the Red Cross feels that it can endorse the work. And just a word relative to standards: *Standards are not determined upon because of any good that may revert to the nurse herself but for the protection of the public. Those who have done public health nursing in any given community realize that if the people are to receive the service for which they are paying and to which they are entitled, the nurse coming into the community must be able to render such service in as efficient a manner as possible. Dealing with human life is a serious business and is one for which we do not wish to be responsible unless we can feel a measure of preparedness for the service which we know we must give.*

### SUPERVISION

After the nurse has been appointed, the actual nursing work which she renders any community is to be supervised by the Bureau of Public Health Nursing in the State Department of Health. The Division Department of Nursing does not go into the field in a supervisory way for the work of any nurse appointed under the Red Cross Public Health Nursing Service. All that is taken care of by the Bureau of Public Health Nursing in the State Department of Health, which in turn makes reports to us daily.

It gives me pleasure to say that so far as the

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.



Department of Nursing of the Lake Division of the American Red Cross and the Bureau of Public Health Nursing in the State Department of Health is concerned, this plan is working out without the slightest friction and we are quite

sure that in the future the work will go on just as smoothly and just as satisfactorily as it has in the past, because it is the desire of both organizations to give public health nursing service to the people.

## Public Health Nursing Service in Norwalk, Ohio\*

L. Grace Walters, R. N.

**Editor's Note.**—Norwalk may be taken as a representative county seat of many counties of Ohio. In her paper Miss Walters shows just how useful a good public health nurse can make herself to the community availing itself of her services, providing she knows her work and is clever enough to get the authorities, organizations and best folks of the community behind her. Considering what Norwalk has paid in the past for public health nursing service the expenditure has certainly been one of the most paying investments the town has ever made and other county seats would do well to follow Norwalk's example and be even more liberal in remunerating their public health nurses for services that mean so much to community welfare.

**N**ORWALK is the county seat of Huron county, Ohio. Its population numbers about eight thousand people, the majority representing the industrious laboring American who is anxious to contribute in so far as he is able to making Norwalk a better, cleaner, and more healthful city.

### PROBLEMS OF THE FLOATER AND INDIGENT

But like all other county seats, we have the problem of the *floater* to struggle with. The real poor from the country around move into the city, knowing they will receive help quickly if needed. In this type of resident we at once recognize the aversion to steady employment, the result giving rise to any number of difficulties which are sooner or later referred to the Department of Health and co-operating agencies. The Department of Health secured a visiting nurse to act as sanitary police, her duties being to give relief and clean up the homes of the poor in the city.

At the time I took up the work in Norwalk, the people had found out that no matter how often one cleaned up these people and established them anew, in a few days they were in the same condition as before. We, therefore, instituted a broader program which would include more educational work.

### CARE OF THE TUBERCULOUS

Norwalk has, it seems, more than its share of tuberculosis and as quickly as possible we secured places for some of these patients in Franklin county, Mt. Vernon and St. Anthony's Sanatoria. It was the duty of the nurse to investigate each case and present the facts to the Board of County Commissioners. In cases where it was advisable to give material relief, the necessary expense for sanatorium treatment and transportation to and from the sanatorium was met by the County Commissioners. At this time the fee

for sanatorium treatment was from seven to nine dollars per week, and the patient was urged to remain as long as necessary. This money came from the State Tuberculosis Fund.

We had a few fine recoveries, but many deaths among the patients advanced in years.

In some of our homes we had feeble-minded patients, who were very dangerous to the public health. Some of these cases were syphilitic girls having babies very frequently. Each case was presented separately to Commissioners and Juvenile Judge, and we secured places for them in the Feeble-Minded Institute.

### CARE OF THE FEEBLE-MINDED AND CHILDREN IN IMPROPER HOMES

Another task we had was to take children away from parents who would not keep the home in a fit condition for children to live in. With the help of our Humane Officer, these cases were taken through court and placed in Huron County Children's Home, and a real home it is for the children who never knew a real home life.

We took many children to Gates Memorial Hospital for Crippled Children to be examined by Dr. Stern, and for cases needing treatment and help, funds were secured from the County Commissioners. This with bedside care to chronic and tubercular patients took up the first few years' work. The salary of the nurse at this time was seventy-five dollars a month and it was necessary to walk to every call.

### EXAMINATIONS OF SCHOOL CHILDREN

We do the above mentioned work whenever we find the cases at the present time. In 1917 we took up the work of physical examinations in the public schools, the nurse making the examinations, sending notices of defects found to the parents, and advising them to consult their family physician. In cases where the physician advised treatment and the parents were unable to meet the expense, the nurse would procure the funds from the co-operating public health

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

agencies. Parents responded to the notices in regard to defective tonsils and defective breathing, and if necessary, had operative work done.

#### HELP FOR THE NEEDY

In the spring of 1918 our County Commissioners, having had so many calls for financial aid to the sick poor, and as the result of personal talks with doctors and public health nurse, gave three thousand dollars to the Norwalk Memorial Hospital per year for the care of indigent cases in need of surgical or medical aid.

In the summer of 1918 we had our first free clinic. Dr. Morse, our surgeon, removed tonsils and adenoids from forty pupils, who were cared for at the hospital through the county funds, Dr. Morse giving his surgical service. These children were in a pitiable condition,—anaemic, of tubercular tendencies, and rheumatic. In many of these cases the gain has been remarkable.

Another very necessary item was our Loan Closet, which was provided by Women's Clubs. This Closet was supplied with bedding, baby clothing, etc. Articles are given out when needed, and we do need them dreadfully at times.

It had been the custom up to the present for the nurse to dispense old clothing, food, etc., to the poor when needed, taking up much valuable time. I think I must have made forty calls to people of influence and had three public meetings, and now we have a Red Cross Social Service, with a capable woman at its head. It will have a field secretary and office; thus relieving the nurse of some parts of social service work. Eventually, the aim is to have Associated Charities, perhaps in another year. This will be a great help especially to families who are down and out through sickness and other causes, helping them on their feet and placing them where they may earn.

We now have a *tuberculosis fund* secured from the sale of Red Cross Christmas Seals, which gives relief in the way of sputum cups, window tents, blankets, etc., to patients whose circumstances are such they cannot be moved to sanatoria.

We have a *milk station* under the supervision of the dietitian of the school cafeteria. We have some well-to-do people who have cows and an over supply of milk. It only needed a suggestion to them and they offered to send the milk if we would provide the way. We bought cans with money from the tuberculosis funds and made arrangements with general delivery to deliver the milk free to the school. The milk is given out to families who are fighting tuberculosis and could not buy the milk. The cans are cared for and scalded at the kitchen.

#### WORK DURING THE INFLUENZA EPIDEMIC

During the war, I was called to Red Cross duty at Washington, D. C., and later when the influenza came to our home section, at the request

of Norwalk, the Red Cross returned me there on November 18. At that time the salary was raised to one hundred and ten dollars and taxi hire. I gave bedside care to two hundred and sixty-six influenza patients. At Christmas time the salary was raised to one hundred and twenty-five dollars and taxi hire.

#### PREVENTIVE MEDICINE

Upon my return an office was fitted up in the school building and during the epidemic we had wonderful need of the office and have had ever since. No child was admitted to the class room after illness without a certificate from the doctor or being thoroughly inspected and questioned by the nurse, and if the teacher found any suspicious signs, the child was inspected by the nurse and sent to the doctor or home as the case required, and so far, we have not lost a school child by death from contagious disease or any other cause.

We have school board members, a school superintendent, and a secretary of the board, who are progressive in all health lines and preventive work.

In the fall of 1919 the entrance of parochial schools into our public health system added four hundred and fifty more children to the list, making a total of sixteen hundred under the nurse's supervision. We also have health league clubs which award a gold star for five points carried through a semester.

*Physical examinations* are conducted yearly besides the special inspections every two weeks for contagion, cleanliness and pediculosis.

A *helping school* has now been in progress for three years. This has been of inestimable value to children who are retarded on account of ill health. They are given personal help with their studies.

A *sight saving class* was started in September, 1919, for the benefit of pupils in whom eye defects were discovered in the physical examinations. They were examined later by eye specialists. The nurse had the entire work of getting the class together, but the advance of these pupils well repaid us. The state partly pays for the education of these children through the state fund for the blind.

#### DENTAL PROPHYLAXIS

We found in our examinations that the teeth were being neglected, although we had tooth brush drills. Our board of education and dentists met several times to discuss the proposition, the nurse each time presenting the situation. The outcome was that the board of education bought a dental chair, sterilizer, and instruments, and our local dentist gives a half day to dental examinations. A dentist examines about one hundred and ten pupils in an afternoon. Both parochial and public school children are examined from the second to the seventh grades inclusive. We have two helpers at these examinations be-



sides the nurse; a junior high girl to keep instruments sterilized and one as secretary. The nurse is kept busy lining up the pupils and attending special cases. A notice with leaflets is sent in sealed envelopes to parents, advising them of the condition of their child's teeth.

In March, 1920, the nurse's salary was raised to one hundred and fifty dollars per month and taxi hire. We have asked for a school doctor for the coming year. They think it very wise to give

the nurse a car to carry on her work, which will be a wonderful help.

We have had a *fly campaign* for two years, paying the children fifteen cents per hundred for all flies killed. This is done as a preventive measure in tuberculosis and contagious disease.

It has taken a long time to bring about the results mentioned. We have work yet to do, but feel that we are now progressing in the right direction.

## Water Supply Control in Ohio\*

W. H. Dittoe, Chief Engineer, Ohio State Department of Health

Editor's Note.—When one considers that within the past fifteen years the municipal or public water supplies of Ohio, which are available to some four millions of people, or 75 per cent. of the total population of the state, have been brought under the control of the State Department of Health, one may begin to realize that another miracle of modern science and engineering has come to pass. The average man cannot stop to consider the source of the water he drinks. He is dependent on community, municipal, county or state control. The health departments of these agencies of government have done their work so well that the places are few that still remain to be discouraged from the use of disease-breeding water. Perhaps the most striking result of water supply control has been the elimination of typhoid fever and various dysenteries attributable to polluted sources of supply. While pure drinking water costs the tax payer something, the price is cheap in comparison with the expense of preventable diseases.

THERE is no single factor of more importance in affecting the public health than the water supply used by the people for drinking purposes. Modern standards demand water of unquestioned sanitary quality and with the universal use of water meeting this standard, we have little to fear regarding the prevalence of typhoid fever. Much progress has been made in the improvement of public and private water supplies and experience has demonstrated that with adequate state and local control, it is possible to insure for the entire population at all times water supplies which can be used with safety.

### SOURCES OF WATER SUPPLY

In the broadest sense, the source of all water supply is the rainfall. Rarely is the rainfall directly available for use, but it is recovered by means of wells after it has percolated into the ground, or by means of intakes drawing water from streams and lakes which contain that portion of the rainfall which is termed the *runoff*. To control the water supply of the state effectively, it is necessary to protect the ground water supply and the surface water supply from undue contamination. This involves the necessity of controlling not only the selection of the water supply, but also the methods used in disposing of sewage.

Let us consider the drinking water supply used by the average family. If the family is resident in a city, the regular water supply will probably be the municipal public supply, drawn from the mains, or perhaps preference may be given to a commercial water distributed in bottles or to a

private well. Then there will be used day in and day out water obtained at the factory, the office building, the restaurant, the hotel, the school and other places where the various members of the family spend their time. Such places may use the municipal supply or perhaps some other source. When a trip is made on a railroad train or interurban car, the water furnished by these carriers is used, and when a vacation is spent at a summer resort, or a trip is made to a neighboring city, the water supply locally furnished is the only one available. The country dweller is more regularly furnished by water from his own private well, and only on rare occasions uses the various classes of supply which the city dweller encounters. *The average man does not stop to consider the source of the water served to him, and this is not surprising. He is dependent upon the efficiency of the state and local control of sources of water supply and is not expected to use individual discretion in this matter. This being the case, there is undoubtedly a necessity for careful control of all sources of water supply by state and local health departments.*

### PROGRESS IN WATER SUPPLY CONTROL IN OHIO

The state of Ohio and its political subdivisions have accomplished considerable progress in control of water supplies and it may be advantageous to recite the control now practised. The municipal or public water supplies of Ohio which are available to some 4,000,000 people, or 75 per cent. of the total population of the state, are subject to the control of the State Department of Health. The law which has been in effect since 1893 requires approval by the State Department of Health of such supplies before they are developed. The laws, moreover, give the State Department of Health supervisory control of main-

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

tenance and operation of public water supplies and permit the issuance and enforcement of orders requiring the abandonment of unsafe sources and the substitution of suitable water supplies. For the purpose of carrying out the provisions of these laws a staff of sanitary engineers, bacteriologists and chemists is maintained by the State Department of Health and frequent investigations are made of existing and proposed water supplies and methods of sewage disposal which may affect water supplies.

The use of water supplies in the factory, the office building, the hotel, restaurant, school, and other places of semi-public nature, is controlled by the local health department. The efficient city health department makes frequent examination of such supplies and requires their abandonment if there is any question regarding their safety. Usually, with a safe municipal supply, the use of private water supplies in such instances is discouraged. The local health department also controls the distribution of water supplies sold in bottles, and unless such supplies are above suspicion, their distribution is not permitted.

The water supplies furnished by railroads and other public carriers are controlled by government requirements. The interstate quarantine regulations of the Department of the Treasury prohibit the use of water on railroad trains and other public carriers, unless the supply is of high bacterial standard and has received approval by the State Department of Health. The regulations also require the certification of ice used for cooling unless the water is stored in a container separate from ice. Thus the traveler, whether he realizes it or not, is amply safeguarded from contaminated water while on the train.

#### THE SUMMER RESORT WATER SUPPLY CONTROL PROBLEM

One of the most difficult classes of water supply to control is that represented by the summer resort water supply. It is inconsistent, but nevertheless a fact, that people who are accustomed to high standards of sanitation at home are willing to spend their vacations at resorts where sanitary conditions are deplorable. This indifference is one of the principal reasons why control of summer resorts is so difficult. The State Department of Health exerts control over public water supplies and water works systems installed for resorts, but does not control the use of private and semi-public wells which are the usual sources of supply. These are subject to the control of the local health officials. The State Department of Health is now giving serious thought to the summer resort problem, and while it must be admitted that the present control of water supplies at such places is not as complete as it should be, there is hope that effective control will be established in the near future.

#### PRIVATE SOURCES OF WATER SUPPLY

This brings us to a consideration of the private

well. In a city which has provided a suitable public water supply, the private well has no place, and all such wells should be abandoned. Too frequently this is not accomplished and surveys in various cities with good public water supplies have shown a startling number of private wells still in use. Such wells usually are unsafe sources of water supply and in thickly built-up districts cannot be effectively protected. The active local health departments, under whose jurisdiction the private well question comes, are constantly at work bringing about the abandonment of private wells and the use of the public water supply. Of course, the private well has its field of usefulness as it is the only source of supply available on the farm and in the small community where public supply improvements cannot be made. In these instances the proper location and development of the well and protection of the supply from contamination are matters of vital importance and are features demanding constant attention of the local health department.

#### BENEFITS RESULTING FROM IMPROVED WATER SUPPLY

The most accurate measure of the benefits resulting from improvement of water supply is furnished by the typhoid fever rates. The records of typhoid fever deaths in Ohio prior to 1909 are not dependable and will not be presented. In the year 1909 the typhoid fever death rate for Ohio was 26.5 per 100,000, while in 1919 the reported rate was 8.6 per 100,000, indicating a reduction of 68 per cent. The average of the rates for the period 1909 to 1914, inclusive, was 22.9, and for the period 1915 to 1919, inclusive, was 13.1. It is pertinent to observe that the average of the 1919 rates for the cities of the state was approximately 7, while the average rates for the remaining population of the state was approximately 10. While both records are good, these figures show that the rural districts have lagged behind the cities in the prevention of typhoid fever. *During the period from 1909 to 1919, impure public water supplies of cities having a combined population of 2,000,000 were replaced with water supplies of good quality, leaving at the present time a population of some 400,000, the public water supplies of which are classed as questionable, or unsafe. In the accomplishment of this improvement, state and local control has played an important part and it continues to be a factor in securing further improvement and the proper protection and maintenance of the public water supplies of Ohio. With the establishment of the new system of public health administration in Ohio, as provided for by recent legislation, we may hope that the increased efficiency of local health agencies will accomplish a further marked reduction of typhoid fever by controlling all sources of water supply coming under their jurisdiction.*



## Our Unfortunate Country Cousins\*

G. E. Robbins, M. D., Chillicothe

Commissioner of Health, Chillicothe and Ross County.

Editor's Note.—Says Dr. Robbins: "When you try to sell public health listen to the fiendish yell of the tax payer. A man will spend four dollars and forty cents for a seat in the theater; he will smoke fifty cents worth of cigars a day; he will buy a fine automobile and will use gasoline at twenty-nine cents a gallon; he will lose five dollars at a poker game or take a chance on wild-cat oil and lose half a thousand,—but, touch him for one-tenth of a mill levy for public health and he will have a convulsion that would put to shame an epileptic fit." And yet public health is purchasable and a city or community can determine its own death rate by the amount of money it is willing to spend for disease prevention. The watch-dogs of the Treasury helped to defeat the Hughes Law because it was too expensive and did not provide for a bureaucracy under political control. The delay in making the Hughes Law effective has cost Ohio an incalculable amount of money from the lack of disease prevention. The average productive life of a citizen, according to Dr. Robbins, nets the state over \$18,000. On this basis does it pay to let people be inefficient from curable defects or die from preventable disease?

THE subject of this paper might well be one of a half dozen different themes: "Public Health"—"Public Health is Purchasable"—"Why the Dull Market for Public Health"—or "The Author's Personal Views on the Present Status of the Public's Attitude toward Health Work."

The topic is not at all important. The text has concerned me much more than it will entertain or enlighten you. By way of apology I will say now that this paper is uninteresting in many respects, but when the complete examination has been finished of all the school children in Ross County—height, weight, chest measurement, vision, hearing, throat, teeth, general physical condition and mental development—and comparison made with the city children, we shall have some mighty interesting matter to report that is not yet available.

### THE ERA OF INFLATION

This is the day of inflation. High prices are the rule. The cost does not make any appreciable difference to the purchaser. He wants the best cut of meat and the latest model Cadillac; and the production can not keep pace with the demand. People are clamoring for the luxuries of life as never before. A hundred Charlie Chaplins and Mary Pickfords are in demand at twenty-five cents per admission. The Follies are swamped night and day at four dollars and forty cents per seat. We are not content to drive old Dobbin at eight miles an hour with a rubber-tired buggy, a red plush lap robe and a whip with a ribbon on it. No indeed! Forty miles an hour is about the minimum, except in a Tin Lizzie, and she must step to the point of vibration and to her limit; and that speed is beginning to chafe the man of means; he needs must go sailing through the air at one hundred and twenty miles an hour. It will not be long until that will be no uncommon occurrence. There is a market for everything under the heavens and in the earth.

Oil stocks sell in every city and in every village. Stock salesmen are now as thick as book agents were a decade ago—and they sell their goods too. Men have money for good clothes, good food, good homes, fine automobiles, guns, fishing tackle, golf sticks, fifteen cent cigars, lodge dues, war chest, churches, soft drinks—and hard drinks too, *if only they could be had!*

There are millions of dollars in Ohio available for good roads, and for the cost of all these blessings; complaint is heard from no living soul—and yet these luxuries and semi-luxuries can be enjoyed only by the well man. The sick person can not be happy even with good clothes and an opportunity to sail through the air at lightning speed. The consumptive can not see the beauty of a limousine or enjoy the music of the Follies. The typhoid patient can not eat a picnic dinner at the Country Club or go fishing with a fifty dollar outfit. The fine boulevards and state highways are not enjoyed by the rheumatic. To enumerate the many wonderful advantages for the happiness and enjoyment we at this day have over the days of our fathers would be impossible.

### SELLING PUBLIC HEALTH

To the unthoughtful it would seem that it is possible for every man, woman and child to share in all these great opportunities, for this so-called happiness, but it is not so. Sickness and death are yet very, very common. Preventable diseases rage in every community in the land. Yet, Public Health is purchasable—it can be bought—no one questions that statement, not even the layman. If Public Health can be purchased in Panama, under a tropical sun, amidst the dismal swamps, infected by poisonous insects and venomous reptiles, if Panama can be made into a health resort by money, surely Public Health can be purchased in Ohio. If typhoid fever can be stamped out of the United States Army, if Havana can be freed from yellow fever, why can't preventable diseases be controlled in our country?

*But when you try to sell Public Health, listen to the fiendish yell of the taxpayer. A man will spend four dollars and forty cents for a seat in*

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toldo, June 1, 1920.

*the theater; he will smoke fifty cents worth of cigars a day; he will buy a fine automobile and will use gasoline at twenty-nine cents a gallon; he will lose five dollars at a poker game, or take a chance on wild-cat oil and lose half a thousand, —but, touch him for one-tenth of a mill levy for Public Health and he will have a convulsion that would put to shame an epileptic fit.*

The ninety-five per cent. efficient man in any line of business is a *well man, not a sick one*. The efficient domestic in the home is a well woman, and the efficient clerk in a bank or store is not a sick person. The efficient business man is a ninety-five per cent. efficient man because he is a sound man, and has a family free from disease.

*Public Health is purchasable and a city or community can determine its own death rate by the amount of money it is willing to spend for disease prevention.* Sickness and death are expensive, more so today than ever before. When these days of extravagance are over, when hard times come, as come they will (and I fear all too soon) only the ninety-five per cent. efficient man will be in demand. The old and the weak, the sick and the seventy-five per cent. efficient man will be sidetracked for the man who can and will "produce the goods."

The best health bill ever enacted by any Legislature in any state was practically repealed before it was ever tried. Why? Do you men know? If health is desirable; if to live three score and ten years is desirable; if health can be purchased, why is there no market for it? We pay taxes to support T. B. hospitals, we support the state sanatoria to care for a few incipient cases of consumption, but what are we paying for *prevention*? The death rate from tuberculosis remains practically just where it has been for years, in spite of the fact that we know its etiology and the manner in which it is spread. Just as long as we feed milk from tuberculous cows to our babies, just so long will we follow our loved ones to the cemetery. Just as long as farmers study the stock market more than they do the physical comfort of their children; just as long as more attention is paid to the cow and the hog than is given to the care and rearing of a boy, just so long will the morbidity rate and the death rate remain a disgrace.

We all love to see a fine farm with splendid barns and out buildings; we rejoice to see a herd of fat, sleek cattle grazing over green pastures, but the Lord never made anything half so splendid and glorious as bright-eyed, rosy-cheeked boys and girls, free from taint and defects, wholly normal. The present prevalence of subnormal children (and it goes without question that they are prevalent) is due to our past sins of omission, and is worthy of our study, but this paper will not undertake to even touch on the conditions that brought it about. We all know that

defective children are common and that perfectly normal children are very, very uncommon.

If Public Health is purchasable every death from a communicable disease is an indictment against us. Instead of the familiar saying of the preacher, "The Lord giveth and the Lord taketh away; Blessed be the name of the Lord," it would be very much nearer the truth for him to say, "This young man lies here in his shroud, the victim of man's supreme carelessness."

#### QUIBBLING ABOUT THE EXPENSE OF PREVENTIVE MEDICINE

A survey of Chillicothe, made with reference to the amount of sickness to be found in families where the bread-earner was drawing less than one hundred dollars per month salary, disclosed the following interesting fact: Twenty-seven families reported five hundred and twenty-seven weeks of illness in one year—more than ten years illness for one person.

Oh, well, the "watch-dogs" of the Treasury say, "The Hughes Law is too expensive." Yes, and a city official of Columbus, Ohio, sends out a bid for political preferment to every county auditor in the state and presumes to tell them that if they wish to get a place in the Hall of Fame, to see to it that what is left of the present health measure be wiped out at the next session of the Legislature. I have heard of no county auditor brave enough to answer him with the question, "What undertaking firm are you interested in, Mr. Columbus man, that you must make an appeal to continue the present order of things and follow ten thousand consumptives to the grave every year, and other thousands from other preventable diseases to the grave."

No! Every recipient of that presumptuous letter should cry out from the house-tops,—"No, we shall be no party to a system that neglects the sick and helpless and the unfortunate. I am my brother's keeper, and I am willing to accept that trust and not one soul shall perish from the earth prematurely by reason of my stand against a health program."

But the truth is there is a mighty poor market for Public Health. Does the opposition come from the Christian Science brokers alone? Or from the fact that a real health machinery is not in politics? As you know, a real Health Department *does* stand for service, and is the one function of government that is *free* from politics. Is that the reason the market is dull?

Does the bear element represent the medical profession or even any considerable number of it? Does it come from the farmer or the preacher? Why this dull market for Public Health? I ask you men in all earnestness and in all sincerity. I ask myself that question many, many times as I go about old Ross County examining school children where I find a whole school with but three or four normal children in it; children fifteen years of age in the third grade; children



with throats full of tonsils and adenoids; children dull of hearing and defective in vision; children underfed, anaemic and tuberculous. Have these children a chance for life, liberty and the pursuit of happiness? Have they a chance with your child—your child well housed, well clothed, well fed, clear of eye and hearing, clean blooded, vigorous and wholly normal? The answer is obvious. And Ross County is not different from the other counties of the state.

You all know the result of the Draft Boards in the country. The country boy does not stand an equal chance with his city cousin. School examination, health talks, welfare societies, free clinics and a better opportunity for constructive work has told to the disadvantages of the country child, and the only agency that I know of that will correct this inequality is a Health Commissioner who is employed because of his fitness, for whole time work and under civil service, with a sufficient force to do real Public Health work.

But there is a dull market today for Public Health. Is it the fault of the medical profession? Because every physician does know that Public Health is purchasable. Is it due to the opposition of the politicians? Because every politician knows that a *real* Health Commission stands first for *service*, and will not be used for political ends though the heavens fall. Is it due to the ignorance of the people? In these days of daily papers and magazines and welfare workers, spreading the gospel of disease prevention everywhere, is it due to ignorance? Is it due to the taxpayers in general or to the taxpayers of the Cornstack Brigade alone?

I pause for an answer. I am sure I am not certain that I know, but this I *do* know—a well man *can* be ninety-five percent efficient, a sick man *can not* be efficient as a taxi-driver, as a proprietor, as a lawyer, as a doctor, as a judge, as a congressman, as a senator, or as a president, and I do know that Public Health *is* purchasable.

The main objection to the Hughes Bill was the expense connected with its operation. When it was passed by the Legislature it was pronounced by all Public Health men everywhere as the best health law ever enacted. It provided for qualified health officers and for full-time men. It really meant to give health protection. The men who framed this bill knew that Public Health is purchasable, and knowing that, they believed that the majority of our people knew it too and would promise efficiency and would be run free from politics. These men and its law-makers too, for that matter, seemed to think that our citizenship had progressed far enough to have learned that communicable diseases would be handled and controlled. Object lesson after object lesson had been placed before the people proving what sanitation and prevention had done. Panama, from a pest-hole of disease, had been made a health resort; Cuba freed from yellow fever,

typhoid fever in the Army wiped out, and so forth.

These well-known facts, it seems should be known by all men, and if Public Health was purchasable in Panama money could buy it more readily in Ohio than away off there in a new country. But before the Hughes Law was ever tried the howl went up from all over the State that the expense of the new law would be ruinous; that some counties could not possibly organize under the law; that a new Health Commissioner, drawing a three thousand dollar salary, a clerk at fifteen hundred, and a nurse at fifteen hundred would cost a county less the State subsidy three thousand dollars, a sum of money absolutely out of proportion to the good that could come from the operation of the law.

*Well, three thousand dollars is a lot of money to raise by taxation in a county worth sixty millions of dollars. It will buy one automobile, it will pave a half mile of road—but, is it possible for three thousand dollars to save a life? Is it possible for three thousand dollars to prevent an epidemic? Can that much money do any constructive work in building a better citizenship?*

#### CHALLENGING RESULTS OF THE SCHOOL SURVEY IN ROSS COUNTY

What has all this peroration to do with our country cousins? A partial survey of school children in Ross County shows that seventy-eight per cent. of all the children are defective. In one school just two normal children were found. Bad teeth, enlarged and diseased tonsils, impaired vision and defective hearing were common. Fifteen year old children were found in the second and third grade, underfed and tuberculous too. Does it cost Ross County any money to carry the burden of all these defects? Are these children efficient? These children are not any different from those of any other rural district. The same result will be found, no doubt, from a survey in every county in the State.

#### THE APPROXIMATE COST OF A CHILD

From birth to five years of age.....	\$ 375.00
Five years of age to ten years.....	500.00
Ten years of age to seventeen years.....	875.00
	<hr/>
	\$1,750.00
Cost to State for education through Grammar School .....	\$ 750.00
Cost to State for education through High School .....	400.00
	<hr/>
	\$1,150.00
Total cost of education \$1,150.00, plus \$1,750.00=	\$2,900.00.
Average expectancy of life at birth.....	44.5 yrs.
Average expectancy of life at ten years.....	46.9 yrs.
Average age at beginning of production.....	17 yrs.
44 less 17, equals 27, number of productive years.	
Average earnings per year for a normal man,	

\$800.00; 27 times \$800.00, equals, \$21,600.00. Cost to State, \$2900.00. Earnings, \$21,600.00, less \$2,900.00, equals \$18,700.00, net amount accredited to the State.

Does it pay to save a child's life, or does it pay to add efficiency to the child through examination and constructive supervision? As has already been noted approximately seventy-eight per cent. of all school children in rural districts are defective. Approximately fifteen per cent. of all these are *seriously* defective; while ninety-five per cent. of all these defects are remediable. There are about five thousand school children in Ross County, outside of Chillicothe—fifteen per cent. of five thousand is seven hundred and fifty. Seven hundred and fifty children in one county seriously handicapped by reason of uncorrected defects; seven hundred and fifty children who have not an even chance and an equal opportunity for life, liberty and the pursuit of happiness, to which each child is entitled under the Constitution. These children are not efficient now; they will not be efficient in ten years from now unless these defects are remedied soon. And who will pay the bill should these defects go uncorrected? Can a seventy-five per cent. efficient boy do a ninety-eight per cent. efficient boy's work? Can a domestic in the home be satisfactory when she is only seventy per cent. physically efficient? *Be patient with the man behind the counter, or the man behind the plow, unless you know he is ninety-five per cent. physically fit.*

#### THE COST OF SICKNESS AND ITS INEFFICIENCY

It is a serious mistake tax payers make to think that because they do not support a health department they are saving money. With no health machinery, sickness is bound to increase, communicable diseases will spread, dirty grocers will sell infected cakes, milk handlers will grow careless, and, instead of a health fund created by a uniform tax which would amount to but a small per capita sum, the poorer tax payer will individually pay out many dollars on account of sickness. A normally healthy man or woman should be ninety-five per cent. efficient, and, if so, then the results of labor are satisfactory. If one is sixty per cent. efficient by reason of personal illness, or in an abnormal condition because some member of the family is ill, then the result of his efforts are *not* satisfactory and production is lessened. In that case the proprietor is paying the bill, so I mention these facts in order that we may clearly see that with or without a Health Department these bills must be paid.

A farmer or most any tax payer will pay a doctor's bill for typhoid fever in his home, or a funeral charge for a death from tuberculosis without a murmur, which he should do, of course; but when it comes to paying one-tenth of one mill taxes on his property, which would amount to a few cents on the average, for Pre-

ventive Medicine he kicks like a Kentucky mule. He seems to think that sickness is a visitation of Providence, and it is almost a hopeless task to teach the average man that health is purchasable.

That Public Health is purchasable is an absolutely new proposition to most tax payers. That sickness is expensive no one denies, but, strange to say, health protection has been left, hitherto, in a large measure to the individual. Sickness in the home is or should be a purely personal matter. But when the home is a source of infection, endangering the public, it at once becomes a matter of public concern. Smallpox or tuberculosis in the home is a personal matter, just as long as it is confined to the home, but, unless regulated by law, it is sure to be a public menace.

In the survey made in Chillicothe under my direction, in which twenty-seven families reported five hundred and twenty-seven weeks illness in one year, in homes where the bread-winner was drawing less than one hundred dollars per month, did that much sickness cost anybody anything? Did it cost only the bread-winner? Or did it cost the city anything by reason of inefficiency or in less production? You know the bill was paid by all of us.

The amount of sickness stated above is duplicated many times in the country districts, with this difference: In the city the family has the advantage of welfare nurses and free clinics, while in the country hundreds of children are deprived the benefits of visiting nurses and remediable defects are never observed.

I spoke a moment ago about there being not less than seven hundred and fifty seriously defective children in the primary grades in Ross county. Inefficient at least fifty per cent, and we all know that is too high—seven hundred and fifty times four hundred dollars is three hundred thousand dollars, the money loss to Ross county each year by fifty per cent. efficient men; and will this fifteen per cent. of defects carry on through each year of life? Most certainly. There are more than fifteen per cent. inefficient men and women in every year of age from the school period through life. Where are they? Our quota is thrice filled at the Athens State Hospital for the insane; the Epileptic Hospital has more than is allotted to our county; our Feeble-Minded Home is caring for more than our share of children; our penal institutions are well represented; our reformatories and hospitals are busy caring for our defectives; and we personally know that we pay money out daily for carpet-beaters, painters and sometimes for teachers, preachers and doctors who are not ninety-eight per cent. fit.

#### SAVING THE CHILDREN UNDER FIVE YEARS OF AGE

I have not mentioned the children who die under five years of age or of any age from preventable diseases. With the knowledge that we



can use *now*, with a real health machinery, fifty per cent. of these should be saved each year. Is it worth while? Is a human life worth anything? I guess not, unless it is in our own family, close to our hearts. The greatest public need today, taking the State all over, is medical supervision of our school children, with a nursing service sufficient to see to it that defects reported by the examiner are corrected.

Are we not stupid when we fail to carry on a systematic effort to improve physical development and to further physical conservation?

The County's health is a County's concern; the Nation's health is a National concern. It underlies all business and industrial effort. We have been emphasizing the A, B, C's and neglecting the physical condition, the all-important element in reflecting knowledge and converting mental equipment into anything worth while. We have been trying to build a permanent shining superstructure upon a foundation of shifting sand.

#### CONCLUSION

Is it a mistake to bother about Public Health

in country districts? Will the end justify the means? Will it pay? That there are many hundreds of children in Ross county suffering this very day with remediable defects I know. That these same children are being retarded in physical and mental development because of this handicap I know. That the struggle for bread or for preferment by these unfortunate country cousins is an unequal one with the boys and girls of the city who have opportunities not now shared by the country child I know. But can we afford to make ourselves unpopular by preaching the doctrine of good health and enforcing the measures necessary to carry out a constructive program that really means something? For many of the important measures insisted upon by the Commissioner of Health are resented. We are proclaimed meddlers, faddists and trespassers. But, speaking for myself, I welcome the struggle. I yield the place and opportunity that belongs to the true Commissioner of Health to no man. No preacher, since the days of the greatest preacher of all, who healed the sick, opened the eyes of the blind and made the lame to walk, ever had such an opportunity as we have this day.

## Venereal Prophylaxis in Civilian Life\*

Henry L. Sanford, M. D., Cleveland

Editor's Note:—Dr. Sanford, from his experience in the late war, is convinced that efficient prophylaxis was the sole explanation for the gratifyingly low rate of incidence of venereal diseases, among the five million men in uniform, in comparison to the rate of exposure. The question now arises as to whether these same men and others should not be protected in civilian life by venereal prophylaxis, as they were in the army. The criticism of moralists would be just if prophylaxis were planned and established simply to encourage irregular conduct, but the whole problem rests on the undeniable fact that until human nature changes, extra-marital intercourse will continue, with all the dangers of infection it implies. In consequence prophylactic stations would seem to be demanded if venereal disease infection is to be controlled in civilian life. Dr. Sanford deplors the use of prophylactic packets by the individual with the fancied assurance of safety against infection they inspire, and also a distinct temptation to exposure.

ANYONE who had an opportunity to observe the results obtained by the use of venereal prophylaxis in our army during the late war, and especially in France, must have been impressed with its efficiency as a preventive of venereal disease. The fact of its efficiency, under conditions of timely and proper administration, has been so abundantly proved by numerous sets of carefully taken statistics in military life, that we need not quote them here.

Accepting this efficiency as an established fact, as a natural sequence the thought arises why should not the civilian public be given the same protection against venereal infection that we thought so vitally necessary to our soldiers. It is the object of this paper to offer some considerations on this subject.

#### MEETING THE OBJECTIONS TO VENEREAL PROPHYLAXIS

Let us anticipate certain objections which may be raised to such a plan. The most obvious one is that the conditions of military life with its means of enforcing discipline, favorable to the almost universal application of prophylaxis, do not obtain in civil life. This is entirely true. The reason for insistence on prophylaxis while the war lasted was to keep the men fit to fight, and after the armistice it was to keep them fit to go home. Among the five million men in uniform the rate of incidence of venereal disease was gratifyingly low in comparison to the rate of exposure. Efficient prophylaxis was the sole explanation. Shall we then immediately lose interest in the health of five million men from a venereal standpoint, the day they change their uniform for civilian dress, to say nothing of other millions of men who never were fortunate enough

\*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

to have been protected by prophylaxis? If means for taking venereal prophylaxis in civilian life should be established, they would be offered as an opportunity to escape infection and not as a military requirement. The need for protection against infection exists now just as in war time, and though we haven't the military means of making men who expose themselves to infection, take precautions, should we, on that account, refuse them the opportunity of so doing? If we do, it means that we are wilfully turning our backs on an assured percentage of infection when we know how to prevent it.

It may be objected that if community prophylactic stations were established, the demand for them would be small. It is true that it would take some time for the public to learn that they were available, and many might at first hesitate to use them. Any man, however, who had been protected against infection by prophylaxis during his army service would certainly recognize their value, and that there is a definite demand for such stations is shown by the fact that we have been asked in the past few months by at least twenty ex-service men why the protection they were given in the army should not be available now. We feel that demand for prophylactic facilities would develop fast if the opportunities were once offered.

*A third obvious objection will be raised on moral grounds, that if it became generally known that prophylactic stations were available, where the possible consequences of sex indulgence could be avoided, all fear of infection would be removed and the assurance of safety would simply serve to encourage irregular conduct. This criticism would be just if prophylaxis were planned and established in that spirit. But the whole problem rests on the undeniable fact that until human nature changes, extra-marital intercourse will continue, with all the dangers of infection it implies. The preachings of moralists, the teachings of physicians, the enactment of laws, and the fear of punishment or infection, all of them combined have not yet succeeded in stopping man from satisfying an instinct which is among the most primal, and there seems to be no indication of any immediate radical change in human nature.*

It is not that we do not heartily approve of the value of the proper presentation of the principles of sex hygiene; of the teaching of continence in the unmarried; or that we fail to appreciate the civic and social betterment agencies which provide playgrounds, athletics and amusements to distract attention from sex matters by a healthful fatigue. It is because we realize that though these agencies accomplish a vast amount of good, there is always a considerable percentage of individuals who either will not profit by them, or who in spite of them continue to expose themselves to venereal infection, and with discouraging success. To deny this percentage is to deny facts. To ignore it by saying "What more can we do?"

is like telling a child to keep away from a hot stove, and then leaving it to burn itself. It seems to us the answer to the question is to employ a constructive means of prevention which wide experience in the army proved to be effective, and to offer it to the public for the benefit of the known percentage of individuals whom other agencies seem powerless to control.

#### FAILURE OF THE PROFESSIONAL ATTITUDE IN THE PAST

For years the medical profession has been doing its best to patch up this steady percentage of individuals who apply for treatment only after their infection is well established. For years physicians have realized that locking the stable door after the horse is stolen is an inefficient and half-hearted way of handling the problem, especially as patients of this sort are hard to control, and treatment is seldom carried through to a complete cure, so that the individual's infection becomes not only a danger to himself, but a menace to others.

Many of us have doubtless reproached ourselves in the past for this non-constructive attitude, but we felt that public opinion was not yet ready to accept the radical proposal of civilian prophylactic stations. In the past few years, however, the public has constantly been getting better informed about venereal disease, and now is becoming more interested in means for its prevention. It has taken the war, however, to teach us many things, and to those of us who worked on the prevention of venereal disease among troops, the lesson of the well-nigh absolute efficiency of prophylaxis was so thoroughly demonstrated that we feel it nothing less than a duty on our return to civilian life, to do everything in our power to offer the civilian public the protection we saw so effectual for the soldier.

#### VALUE OF VENEREAL PROPHYLAXIS

We feel prophylaxis should be offered the public for two reasons, (1) as an economic measure, and (2) to safeguard the public health.

*Economy.*—Let us try to form an estimate of the economic loss caused by venereal disease in the community. The Social Hygiene Bulletin, in an article on the relative efficiency of venereal disease reporting in the various states, estimates that during the year 1919, there were 217,491 cases of venereal disease in Ohio. This figure was obtained by multiplying the estimated population of the state on January 1st, 1919, by the percentage of venereal disease in Ohio troops in the second million of the draft. As men of draft age were drawn from all classes of society, it is probable that the estimate contains as small a margin of error as any that could be obtained. It is an understatement to say that each one of these 217,491 cases costs the community \$100, for its primary care, whether the individual patient pays the money out of his own pocket to a private



physician, or whether he is treated at a dispensary. Cases of gonorrhea and chancroid usually imply shorter duration and outlay for drugs than properly treated cases of syphilis. Assuming this average we have an item of nearly \$22,000,000 for primary care.

To this must be added the time lost from work due to disabling complications of venereal disease, especially epididymitis, prostatic abscess and gonorrheal rheumatism. Supposing 60 per cent. of the total cases in Ohio are gonorrheal, and that 20 per cent. of the 60 per cent. have a disabling complication, which would keep them from work with an average time loss of three weeks apiece, and that each patient had a minimal earning capacity of \$40.00 a week, we have the further item of 130,494 cases losing wages of \$120.00 each, making a further economic loss of \$15,652,000.

This analysis does not include the secondary effects of venereal disease with the disability, loss of earning power, and shortening of life they produce, such as urethral stricture, the mutilating operations, sterility and invalidism following gonorrhea in women, and the brain and cord lesions of syphilis.

The actual economic loss to the community resulting from these secondary effects is difficult to estimate, but to the thirty-seven millions of the first two items it is safe to add in loss of earning power and shortening of life enough to bring the total up to fifty millions of dollars,—the sum venereal disease costs the people of Ohio in a year. The question whether it is worth while to try to save 50 millions a year, which are now being spent on entirely preventable diseases is not open to argument. The only point we have to make is whether, in addition to the various agencies that are now in operation to prevent the occurrence of venereal disease, but which, commendable as they are, are falling short of success by a margin of 50 millions of dollars a year of economic loss, we should provide still another agency, that of venereal prophylaxis for the public, the only truly constructive medical agency in the lot.

*Public Health.*—Aside from the economic loss, reckoned in dollars and cents, due to venereal disease, each case is a potential menace to public health as a result of innocent or criminal transfer of infection from the patient to others. Health authorities throughout the country recognize this, and in most states venereal diseases are among the contagions reportable under the state law. That these laws are not observed is shown in the article quoted above, in which the efficiency of venereal disease reporting varies in figures submitted by 42 states from 19.6 per cent. in Massachusetts to .7 per cent. in Wyoming. These figures do not pretend to be accurate, but even allowing a large margin of error, they show the inefficiency of the system. The attitude of health authorities in insisting on the reportability of

venereal disease is logical and inevitable, but physicians would not be put in the position of having to report their cases of venereal disease if their patients had taken proper and timely prophylaxis, in fact they would not be patients.

#### CONTROL AND MAINTENANCE OF PROPHYLACTIC STATIONS

If these considerations have at all persuaded you that venereal prophylaxis in civilian life is justifiable and advisable, we have to consider by whom the prophylactic stations should be controlled and maintained. It seems to us logical that as the whole affair is one of public health, that these stations should be under the Department of Public Health, preferably under state rather than municipal control, as only in this way could prophylaxis be offered to country districts.

The plan could be put in operation by establishing one or more stations in a large city, extending the system as it proved successful. If these stations could be placed in already existing municipal or state health centers, the overhead expense of their maintenance would be greatly reduced.

We believe that no attempt should be made to camouflage their purpose by calling them *Early Treatment Stations*, but that they should be known as *Prophylactic Stations*, and their object clearly understood. Experience in the army proved that to function at full value, these stations must be open night and day, requiring the services of a night attendant. The day attendant might be recruited from the day personnel of the health center.

#### METHODS IN VOGUE

It is not necessary, before this body, to go into the details of equipment or technic of administration of treatments, except to say that much was learned during the war of the efficiency of various prophylactic agents, and especially of the almost specific value of thoroughly applied green soap as a preventive of chancroid, and conversely, the almost total failure of calomel ointment to prevent its development.

In this connection we believe that a sharp distinction should be drawn between the value of a properly and scientifically given prophylactic treatment at a prophylactic station and the use by the individual himself of a self-administered prophylactic package. We feel there is a distinct place for the first but that there should be none for the second, after prophylactic stations once become available.

In France, during the war, individual prophylactic packets were issued to those whose duties took them on trips where for days or weeks they would be out of touch with our own army units. These packets were regarded solely as an emergency issue, their dependability was never con-

sidered equal to that of a proper treatment at a regular prophylactic station and they were never employed as a routine measure.

*In civilian life, we believe that the possession of prophylactic packets by an individual, with the fancied assurance of safety against infection they inspire, is a distinct temptation to exposure,—a wholly different situation from the man who seeks prophylactic treatment only after an unpremeditated contact. The usual prophylactic packet, which consists of a gelatine capsule of calomel ointment, further gives a false sense of security against infection because the average individual will not use it correctly or with sufficient preliminary cleanliness. This results in unexpected infections.*

None of these arguments apply to prophylactic

treatments properly given at a prophylactic station.

#### CONCLUSIONS

If the proposal to offer venereal prophylaxis to the public receives the backing of the medical profession, the first task of those who are interested in the plan will be to educate the public to the need for it, and to meet the moral and social objections which are sure to be raised. It seems to us that the way to accomplish this is to support with all our power the present moral and social agencies now operating to prevent venereal disease, and to offer prophylaxis as an added measure to stop the economic loss now occurring in the percentage of the community which present agencies are not successful in reaching.

213 BALL BUILDING.

## The Operation of a Venereal Disease Clinic\*

Edgar D. Thompson, M. D., Akron

Editor's Note.—In his paper, Dr. Thompson gives many valuable pointers on the organization and maintenance of a venereal disease clinic, based on his experiences with such an institution in Akron. Location, hours for treatment, and systematic handling of patients are all important details. Furnishings and equipment are decided by the size of available appropriations for the purpose, but they should be plain, substantial and standardized. Methods of treatment should be routine, unless exceptional complications present. The clinic should be advertised, but its main asset in winning patients will be its own discretion and efficiency. Occasionally the big stick of quarantine must be used as a threat to accomplish certain results. Also it is becoming more and more apparent that the clinic must be reinforced with institutional quarantine if certain prostitutes, of the irresponsible and mentally defective type are to be controlled.

#### LOCATION, HOURS AND SYSTEM

THE clinic should be located in the central portion of the city, a place easy of access, preferably in a building into which persons can go for many purposes and thus avoid the necessity of informing the passerby of their object in visiting the building.

As the business conditions differ in different cities it is necessary that the hours for holding the clinic be determined by each locality, in a three shift city, such as Akron, to reach the largest number of persons it is necessary that there be both morning and evening hours. Under no circumstances should the hours for treating men and women be the same if the same rooms are used.

If possible three clinics should be held each week, two for the treatment of gonorrhea and one for syphilis and acute gonorrhea.

Snap and pep must be used in the handling of our patients; system of some kind one must have if we are to be successful in our work—a system which our patients will soon learn and can teach to the newcomer; long waits to see the physician and delay in receiving treatment will make the man restless and impatient. It is well to keep in mind that the time spent in the clinic is a large factor in the man determining whether or not he will continue his treatments.

#### FURNISHINGS AND EQUIPMENT

The furnishings and equipment can range from the things one must have to the things one would like to use; in other words, the financial condition of the clinic and the business judgment of the director will alone determine the amount and kind of equipment and furnishings.

While it is true that our patients would enjoy waiting their turn to receive treatment when seated in a comfortably upholstered chair, gaze in wonder at the subdued colorings of an oriental rug, look with amazement at beautiful paintings and odd ornaments and stand in awe before a magnificent array of instruments, it is equally true that a large assortment of instruments and beautiful furnishings will not aid much in giving service or increase efficiency, nor will they permit the patient to forget that he has come to us for the relief of his physical ailments.

The furnishings should be plain and substantial; the equipment need be neither elaborate nor numerous, and in the purchase of both one must keep in mind the use of which they are to be put. One can successfully conduct a clinic having one hundred patients with the following permanent equipment: One operating table, two plain tables, two sterilizers, three irrigation cans, two dozen glass nozzles, two dozen bulb syringes, twelve sounds—assorted, one alcohol lamp, one smear wire, one 300 cc. graduate, two mixing bottles, two 50 cc. luer syringes, or one complete

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.



gravity outfit, one dozen salvarsan needles, two 5 cc. syringes with six needles, two tourniquets, one pocket instrument case, two specula, two dressing forceps and one microscope.

Bear in mind that with the suggested list of equipment we are to treat *only* the venereal diseases; the further we go into the domain of genito-urinary diseases the larger must be our assortment of instruments, the greater our expense and the smaller the number of persons we can treat in a day.

I feel that we can do the most good to the largest number of persons by confining our activities to the treatment of the venereal diseases.

#### HANDLING THE PATIENTS

The treatment is both non-medical and medical. For so many years have the venereal diseases been considered private and secret; diseases one must be ashamed to have, so deep rooted is the belief that they are contracted only through sexual intercourse, that the woman having them must of necessity be or have been a prostitute and the man to have cohabitated with one that we must assure those who come to us that their secret will be zealously guarded, otherwise they will not come.

The patient must be made to feel that we are interested in him, the treatment and cure of his disease; he must be informed that the disease is far reaching in the complications it may produce, is not to be lightly considered, is more than a cold, and that chancre is more than a sore. We must impress upon him the importance of continuing his treatment until he is discharged; especially that the stopping of the discharge is not a cure. (It is the annoyance of the discharge which brings most men to us and its cessation which makes it hardest for us to hold them to their treatment.) Neither does the healing of the chancre or the disappearance of the rash constitute a return to perfect health.

What a blessing it would be to mankind were pain one of the earliest and latest manifestations of gonorrhea or syphilis, for it is pain which usually first sends a man to his physician and the continuation of it which keeps him longest under treatment.

It is our duty to inform the patients that the venereal diseases are not confined to persons living in or frequenting the slums; to acquaint them with the fact that the diseases spare neither age, sex, color or social condition, and that they are contracted in many ways. When they come to us with the statement that they do not know how they contracted the disease take the time to inform them of the ways in which they might have contracted it and thus send them out as missionaries, for the sake of the thousands of children, women and men who are innocently suffering from the diseases or their complications. May God hasten the time when venereal diseases will be as openly and frankly discussed as are the diseases

of the lungs and patients will as willingly admit that they have the one or had the other as they now do typhoid and pneumonia.

#### TREATMENT

As the diagnosis of venereal diseases is not my subject, I will detail only a brief outline of the treatment given at our clinic. In the treatment of no other diseases have we so long or so consistently continued the same methods of treatment or used the same drugs. In the treatment of other diseases newer methods and newer drugs have, from time to time, come forth in a blaze of glory, bringing promise of great things and greater hope to only in a short time be forgotten or put aside for something newer still. With venereal diseases, year after year, we have continued the same methods of treatment and used the same drugs; and well we should, for they have stood the test. So well are these drugs and their action known to you that it is unnecessary to mention either.

In a clinic the size of ours, with limited help, and in which the time it takes to give a man his treatment must be considered, we have found it best to adopt a routine course of treatment and pick out, from time to time, the man who is in need of special treatment.

A smear and blood test is taken of every new patient, after which he is sent to the physician for a diagnosis, who, after making it sends him to the clerk who makes out his history card and places thereon the diagnosis and the treatment, gives him the card and directs him to the treatment room. The old patient after receiving his card takes it directly to the physician who enters upon it the treatment, returns the card to him and he takes it to the treatment room. The physician in charge of the treatment room takes the cards, gives or directs the giving of the treatment indicated and retains the card.

If a diagnosis of syphilis is made the clerk retains the card and instructs the patient to return on the day set aside for the treatment of that disease. If no diagnosis is made, the physician instructs the patient to return at a given time to learn the result of the smear and blood test.

One of the gratifying things to us is the large number of men and women, who, believing themselves to be free from a venereal disease, come to us for assurance that they have been cured or are not now unknowingly suffering from them or some of their complications; since the first of the present year we have had one thousand six hundred and seven persons come to us for this purpose.

We refrain as much as possible from an examination of the prostate gland or calling a man's attention to it, for the reason that when a man believes that his prostate gland is in need of treatment he becomes a burden to himself and a nuisance to others. One could, if he so wished it, soon have his clinic become a Prostate Massage Parlor.

The men who delight in having a sound passed cannot compare to the number who love the sensation produced by a prostate massage.

#### SYPHILIS

Syphilis is treated in courses. Eight intravenous injections of arsphenamine and twelve grains of mercury, hypodermically, at weekly intervals followed by a blood test constitutes our first course. If the Wassermann test proves positive it is followed by four intravenous injections of arsphenamine, the mercury being continued and the patient being watched for mercurial tolerance. Then if the Wassermann is negative all treatment is discontinued for a month. The second and following courses consist of eight grains of mercury, given at weekly intervals; then a rest of a month, continued in this manner for a period of two years. During the first year a Wassermann test is made every three months—a positive test means more arsphenamine unless we are satisfied that we have a case of Wassermann fast.

#### GONORRHEA

Gonorrhea, following an irrigation of five per cent. argyrol, one dram of argyrol, ten grains to the ounce, is injected slowly into the urethra and sealed in with collodion, the patient being instructed to permit it to remain for at least two hours. As the discharge decreases the strength of the argyrol is increased. So long as the smears remain positive just so long do we continue the argyrol. When the smears become negative, the urine cloudy and the shreds appear we change to silver nitrate.

When the patient has three negatives and three clear urines, two glass test, in as many weeks, then a sound is passed to ascertain whether or not there is a stricture; if there is none, the patient is instructed to discontinue all treatment for a period of two weeks, at the end of which time, if the discharge has not returned and the urine has remained clear, he is discharged.

The home treatment consists of irrigations of argyrol, three times a day; the strength is varied as the indications call for a change, and retained for ten minutes; the patient is instructed to drink at least twenty glasses of water a day, to eat plenty of fruit and vegetables and little meat. As most of our patients do hard manual labor we are unable to restrict the diet as we would wish. Internally the only drugs we find it necessary to use are the vaccines, which are used only in the chronic cases though not routinely, and calcium sulphide which is used, more or less, during the entire course of treatment. One great advantage in the use of this drug is that during the time that the patient is taking it he will not indulge in sexual intercourse due to the action of the drug in preventing an erection.

We advise the wearing of a suspensory all of the time. We find that the patients, who follow

this advice, rarely suffer from epididymitis. Chancroids and chancre are treated with the usual antiseptic dressings.

#### QUARANTINE

Quarantine is our *Big Stick* and its usefulness depends upon the way in which we use it. To use it continuously is to soon cause it to become useless; the threat to use it and the knowledge that at times we carry the threat into execution is our best method to compel the patients to continue their treatment.

The quarantining of prostitutes in their own home has not in my judgment proved a success. The woman, who is a prostitute by profession, realizes that a body free from disease is her best business asset and will willingly refrain from conducting her business, when informed that she is suffering from a venereal disease.

The street-walker, the woman who prostitutes as a means of getting an additional income, the one who believes that thereby she may become more popular and the mental defectives are the ones who give us the most trouble; the ones most dangerous to society and our greatest source for the spread of the disease; the type whom we cannot trust to obey quarantine regulations and regulations we cannot enforce without the aid of the police or special officers, to place quarantine notices upon their homes does not help but does cause the innocent members of the household to suffer unnecessary notoriety.

The prostitute of this type, I believe, should be quarantined in some institution, there to remain until she has been rendered non-infectious. I further believe that all persons having syphilitic open lesions should be placed in quarantine, by preference in an institution. All persons placed under quarantine should be informed that such quarantining is done as a matter of health protection and not as a punishment.

The question of the suppression of prostitution can well be turned over to the legal profession. In the prevention of the venereal diseases, as physicians, we feel we can do our full duty through education, quarantine and treatment. To establish *prophylactic stations* would be giving men a false sense of security, laying ourselves open to the charge of aiding and abetting prostitution and encouraging illicit sexual relations by promise of immunity from disease.

#### ADVERTISING THE CLINIC

A small, neat, attractive placard giving information as to the location and hours of the clinic should be kept posted in all public waiting rooms. The question of how best to get women to come to the clinics for treatment and for consultation is still an open one. In Akron we are meeting with success by endeavoring to get each patient to get some friend to come in for examination. All patients are treated with the same kindness, courtesy and consideration we would expect our



own women folks to receive. We go on the theory that the physical condition of women is our only interest, therefore, we do not question them as to their life either past or present.

In a city the size of Akron, with living conditions as they are and with a large floating population, any system of follow-up work, other than through the use of the mails, would prove too expensive for its adoption. Also a too close following-up will make patients resentful and the usefulness of the clinic will come to an end as soon as the patients are made to feel that they are being watched and that they are being compelled to receive treatment. Patients should be made to feel that they first came to the clinic of their own free will and that they continue the treatment for their own benefit.

#### CONCLUSIONS

The three great lessons we have learned through the clinic are, (1) the great need for a venereal clinic; (2) the importance of the Wassermann test, and (3) that syphilis is far more prevalent than we have heretofore believed.

I am not surprised at the large number of persons we find who have or have had gonorrhea but am astonished at the number we find who are suffering from syphilis and who deny ever having had a chancre. As the men come to us voluntarily, freely admitting exposure, we have every reason to believe that they tell us the truth, the question I wish to leave with you is, how do these men contract syphilis and not show a primary lesion?

## Malingering as a Post-War Condition\*

Charles W. Stone, M. D., Cleveland

Editor's Note.—In the industrial world, exaggeration of symptoms and simulation of disability following injury is a fairly common occurrence, according to Dr. Stone. This tendency is undoubtedly increased where a pecuniary value is to be placed upon the suffering and incapacity of the individual. The influence of litigation in magnifying pain and perpetuating incapacity for work is well recognized medically, and utilized legally. Since the enactment of compensation laws and insurance acts relating to accidents and disease, there has been noted a lessening in the morale, a diminution in the sense of social independence and a deterioration in the sense of financial responsibility upon the part of those seeking to take advantage of the benefits allowed by legislation. Now that the war is over, Dr. Stone emphasizes the fact that we are facing similar deleterious effects upon a portion of our recent military organization. The matter should be considered seriously and an endeavor made to meet the situation properly if we are to escape having the community purse unduly drained by those who have the power, but lack the desire to fully maintain themselves.

**D**URING thirty-three months military service, spent on the Mexican border, and in various camps elsewhere in this country, as well as service in France, and later through examination and observation of men, claiming compensation from the Bureau of War Risk Insurance, the writer has become interested in the problem of malingering among service and ex-service men.

#### GENERAL CONSIDERATIONS

A few decades ago not much was heard of malingering. Practically only in prisons, and in naval and military circles, was the term employed. Here were conditions conducive to the elaboration of all sorts of ailments which were feigned in order to evade unpleasant work or duty, or to secure a change from an environment which was irksome. The establishment, in more recent years, in various countries, through corporate or fraternal or paternal insurance, of financial benefits to injured individuals, appears to have offered to many material inducements of which they have not been slow to take advantage, so that today there is an increased and increasing development of malingering, proportional to the increased op-

portunity presented for personal gain through this means.

#### WHAT IS MALINGERING

There is some diversity of opinion as to what constitutes malingering. It has been defined as the feigning of disease or defect. Buzzard calls a malingerer, one who, with perfectly clear and well balanced mind, confesses to himself quite frankly that, for some definite purpose, he will assume a certain disability. Bramwell somewhat broadens the field by considering the malingerer as one who feigns sickness, or who deliberately induces or protracts an illness, with the object of avoiding duty, claiming money compensation, exciting sympathy, or for any other reason. Bailey quotes the opinion of one military surgeon to the effect that in almost all of the cases in which defects were simulated or exaggerated, the patients were actually defective in some manner, and that whether the malingering took the form of mental or nervous or physical defects, it was based in almost every instance on an actual unstable or defective mental state.

It seems reasonable to look upon malingering as the assumption—the manufacture *in toto*—of a condition of disability with a definitely fraudulent intent; as the conscious simulation of individual symptoms for the purpose of gain; or as

\*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

the conscious exaggeration of symptoms, or prolongation of the same, for personal benefit. From this viewpoint one looks upon malingering as varying widely in degree, but with the same general underlying conscious purpose, namely, the promotion of personal gain in some manner on a basis which departs in greater or lesser degree from actual fact.

#### MALINGERING IN THE ARMY

In our army, prior to the outbreak of the war with Germany, men invented various complaints, mainly for the purpose of evading duty. At sick call each new military surgeon in an organization had to demonstrate his purpose not to be imposed upon by those perfectly fitted to carry on. Otherwise his sick rate would be abnormally high, and a definite diminution in the morale of his organization would result. With the outbreak of the war with Germany, but prior to the registration for selective draft, many men presented themselves for enlistment with complaints which they expected would cause their rejection, fondly hoping that this rejection would prevent their subsequent draft. Later, in the camps, men continued to try to evade duty, and some tried to secure discharge from the service on the ground of some trivial or entirely assumed form of disability. And in France, we saw similar endeavors, though in diminished extent, together with a new factor, that of self-inflicted wounds, all designed for the purpose of avoiding service in the forward areas.

It is desired that it be distinctly understood that this condition is not considered to have been the rule, but, nevertheless, that it did exist to some extent. And the fact that it did exist to some extent throughout the army has a certain bearing upon the present situation.

#### COMPENSATION, WAR RISK INSURANCE AND DECREASED EARNING POWER

One of the functions intended through the establishment of the War Risk Insurance was the providing of compensation to the individual in case of disability incurred in the service, or aggravated by such service. In this manner it was hoped that our former heavy drains upon the public funds through the more or less indiscriminate payment of pensions might not be repeated for this war. Many men wounded in the service, and others who became diseased or had a previously existing disease aggravated, have become partially or totally incapacitated for work. These are the men who deserve all the benefits the War Risk Insurance can give them. How adequately or inadequately the government has been able to meet its obligations to these men need not be commented upon here.

The government's liberal interpretation concerning its responsibility in connection with the development or aggravation of various disorders during military service renders it particularly vulnerable to the demands of more or less un-

scrupulous individuals. At this time, somewhat generally among ex-service men, there is an idea current (be the merits of this idea what they may) that the government has not done its duty by them for their services during the war. This naturally leads some of them to attempt to secure through such available agency as the War Risk Insurance the recompense which they consider is due to them. It is the policy of the Bureau of War Risk Insurance to pay compensation on the basis of the degree of reduction in earning capacity resulting from the disability present. Whenever a disabled individual is found by subsequent examination to have returned to such physical and mental condition that his earning capacity is no longer interfered with, then his compensation from the government ordinarily ceases. This has led some to try to secure compensation through pretending to have some form of disability which was not actually present, or to increase the amount of compensation or prolong the period of its payment by simulating some additional ground for compensation or exaggerating existing symptoms.

In the industrial world, exaggeration of symptoms and simulation of disability following injury is a fairly common occurrence. This tendency is undoubtedly increased where a pecuniary value is to be placed upon the suffering and incapacity of the individual. The influence of litigation in magnifying pain and perpetuating incapacity for work is well recognized medically, and utilized legally. Since the enactment of compensation laws and insurance acts relating to accidents and disease, there has been noted a lessening in the morale, a diminution in the sense of social independence, and a deterioration in the sense of financial responsibility upon the part of those seeking to take advantage of the benefits allowed by legislation. Now that the war is over we are facing similar deleterious effects upon a portion of our recent military organization. The matter should be considered seriously, and an endeavor made to meet the situation properly and effectively if we are to escape having the community purse unduly drained by those who have the power, but lack the desire, to fully maintain themselves. The ease with which some ex-service men appear to have secured compensation leads others to follow their example. Several times it has been my experience to be told by men or their families that they knew of others, with claims no better than their own, who were being paid compensation, and that therefore they in turn wished the same consideration.

#### ILLUSTRATIVE CASE REPORTS

A few brief concrete illustrations may be of interest to show that just as partial incapacity for work while in the army was popular because it meant escaping work and cost nothing, now an apparent incapacity is becoming popular because it means financial gain to the individual.



CASE 1.—E. G., complains of pain in his back which has been present since May, 1918, when his back was blistered by mustard gas. He was in a hospital for a short time, and then returned to duty with his command. Following discharge from the army in February, 1919, he worked as a gardener. About November, 1919, he began to receive compensation at the rate of \$80.00 per month, the amount paid for total disability. What the basis was for this I do not know. His general physical, neurological, and psychiatric examination shows no evidence of disability. However he has not worked since that time, because, as he remarked, he could get along all right without working on what the government paid him.

At another time this same man was examined and made no reference to his back, but complained of headache. When it was pointed out to him that he had no discoverable disability, and no real basis for compensation, he argued good naturedly: "The United States Government has lots of money. Let us soldiers get some of it."

CASE 2.—C. B., complains of wrist-drop which has been present since January, 1918, when a piece of slate fell from the roof of a barracks and cut his wrist on the dorsal surface. The patient states that he cannot flex or extend the hand on the wrist, nor flex or extend the fingers "because the tendons are cut." He carries the arm high in the air, so that the dangling hand may be very evident. His desire to convince the examiner of his complete inability to use the hand is most obvious. He has a small scar on the dorsum of the left wrist. There is no atrophy of the muscles of the hand or forearm. Prompt flexion and extension of the hand and fingers are elicited with both the faradic and galvanic currents. This man is working steadily as a machinist. If he were not using this hand he would develop flabbiness of the muscles of the arm and hand, and this is not present.

CASE 3.—M. H., complains of a burning pain between the shoulder blades which has been present since an attack of the "flu" in December, 1918. This illness kept him in hospital for two weeks, after which he was returned to duty with his command, and he continued on duty until his discharge from the army in June, 1919. Some time later he applied for compensation for complete disability, and received \$30.00 per month. That his general physical and mental state is not in keeping with his alleged disability is evidenced by the fact that he is working as a full time member of a city fire department.

CASE 4.—E. G., complains of headache which has been present since he received a scalp wound in October, 1918. There is no apparent injury to the skull, and the general neurological examination is negative. When this was explained to him, and he was urged to state the real reason for seeking compensation, the patient said some of his friends were receiving it, and, as he wished

to get married, an additional \$80.00 a month would come in handy.

CASE 5.—J. M., complains of pain in the right shoulder which prevents the use of the arm. This pain has been present since his third dose of typhoid prophylactic in August, 1918. About a year ago the pain was quite severe, and he applied for and received compensation. Since that time the arm has improved so that he has been able to do his work as a farmer. Recently, however, he was requested to present himself for another examination, and since that time the pain has again grown severe, and the arm has been useless. Examination shows no involvement of the joint, no atrophy of muscles, no disturbance of reflexes, and no abnormality in the electrical responses. The patient was asked how he had come to the examiner's office, and he replied that he had driven the family automobile some sixty miles that day. He then admitted that he had no difficulty in shifting gears or in using the emergency brake with the right arm.

CASE 6.—J. F., complains of a burning pain about the heart, coming on about once a day, and lasting a few seconds. He says that this prevents his working. He considers the pain due to his typhoid prophylaxis. His general physical condition is good. His intellectual level, however, is subnormal. A friend of long standing of the patient's says he notes no difference in conduct or conversation now over those of years ago, except that the patient will not work since he began to receive compensation, because he fears that if he does work the government will stop its monthly payments to him.

#### CONCLUSIONS

Malingering is not always easy to diagnose. This is particularly the case, oftentimes, in trying to distinguish between a malingerer and an hysteric. In the military service not many diagnoses of malingering alone were made. Usually a diagnosis of some simple condition was recorded, and the man returned to duty. Probably now the diagnosis is not frequently met with, but the condition included as a part of the symptom complexes of the psychoneuroses and mental deficiency. The psychoneurotics, psychopaths, and mental defectives, who knowingly simulate and exaggerate for the purpose of obtaining money under false pretenses from the government should not be led to anticipate greater freedom in this regard than when dealing with individuals.

605 ROSE BUILDING.

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#### New and Non-official Remedies

During September the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies: United Synthetic Chemical Corporation: 20 per cent. Aromatized Suspension made from Benzyl Benzoate (Van Dyk and Co.) The Heyden Chemical Works: Proganol.

## The Feeble-Minded Problem\*

Charles F. Neu, M. D., Indianapolis, Ind.

Associate Professor Nervous and Mental Diseases, Indiana University School of Medicine.

**Editor's Note.**—During the past several years The Journal has had occasion to publish interesting papers on the problem of the mentally defective. Dr. Neu in treating of the same subject stresses the community loss involved in caring for the feeble-minded, mentally defective and other incorrigibles in institutions, when proper environment, care and training during the formative years of life, would have obviated the necessity of institutionalizing these individuals and would have made them responsible and self-supporting members of society.

ANY one at all interested in the standard of health possessed by the citizenship of our country must have found much food for thought in the results shown by the various examinations carried out in the selection of the men that were enrolled in the army participating in the great war that has so recently come to an end. When one attempts to make a study of this question it is necessary to take into consideration the important fact, that the results recorded apply only to the health of that part of the male population who should be in the prime of life, and any conclusion arrived at, in regard to the state of health of the general citizenship, must be modified and regulated accordingly. In this combing-out procedure much valuable information was discovered,—one should not say *discovered*, because most of it had previously been recognized by those whose attention and thought had already been directed toward those questions. But it did become more generally appreciated. Many valuable lessons were learned, and if proper application and use be made of this information, it must unquestionably lead to the development of means and measures whereby the degree and extent of inferior conditions of health, both physically and mentally, will be lessened, and the average standard improved and increased accordingly.

### SOME RESULTS OF THE SELECTIVE DRAFT EXAMINATION

It was shown in the recent draft, that in the male population between the ages of 21 and 30 years inclusive, over 29 per cent., some give the average as about 34 per cent., were physically incompetent to become a part of our military organization. One state is reported as having a percentage of rejections as high as 46.6 per cent. Investigations made by the division of psychology of the U. S. Army under the direction of Major Yerkes, have shown that approximately 2 per cent. of the drafted and enlisted men mobilized were so inferior mentally as to be unfit for the regular military service. It was further shown that in a series of 14,000 individuals, recommended for rejection because of this mental deficiency, 30 per cent. were classed as mentally defective, 12 per cent. as epileptics, the remainder being made up of various types of

neuropathy, psychopathy and constitutional inferiority. If this be a measure of the standard of mental health of the rank and file of our young manhood as it was brought before the military neuro-psychiatric service, even after it had already passed through the weeding-out process of the various draft boards, what must it be when the whole citizenship is taken into consideration; and furthermore, if this be true for the department of mental diseases, what must be the situation when all branches of medicine are taken into consideration. If a thorough investigation were made, and the actual conditions fully determined, it must be evident that the results would be more or less staggering to most of us. However, one must bear in mind, and this fact should be fully appreciated, that many of those rejected as physically unfit for military service, were adequately equipped, physically and mentally, to assume the responsibilities and carry out the obligations and duties which devolved upon them as individual units of the social organization of which they formed a part. Even amongst those who were rejected as mentally unfit, there doubtless were many, who under the average normal conditions of life, were capable of earning an independent livelihood, and of being self-supporting, so they would not become a drain upon the community of which they formed a part. but undoubtedly many of these will, sooner or later, fall in the struggle for existence in the competition with their fellow-workers more favorably endowed, and will thus become applicants for assistance, support, protection and care from whatever source this may be obtainable.

### REPORT OF THE INDIANA STATE BOARD OF CHARITIES

A glance at the conditions in our own state will give us a fair conception of what will be found to exist throughout the country as a whole. In the last report of the Indiana State Board of Charities it is shown that there are approximately 5,600 inmates in the hospitals caring for the mentally sick, 1,450 in the school for the feeble-minded, 400 in the hospital for epileptics, and over 3,000 in the penal and correctional institutions. These require the constant attention and work of approximately 1,500 healthy, able-bodied persons to give them the care and attention that may be necessary. This protection and care entails the expenditure of approximately \$2,275,000 in regular appropriations, and of nearly \$1,275,-

\*Read before the Section on Nervous and mental Diseases of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.



000 in special appropriations. Taking the population of Indiana as about 2,275,000, and that of the United States as a whole as 110,000,000, it means that if the conditions elsewhere are similar to those in Indiana, there are over 200,000, mentally sick, over 50,000 feeble-minded, over 15,000 epileptics, and over 100,000 in the penal and correctional institutions requiring the attention and work of over 50,000 otherwise healthy persons to care for them at an expense of \$75,000,000 to \$100,000,000 annually.

#### COMMUNITY LOSS

But this is not the only loss to the community at large, since it also means the loss of what their productivity might be. Furthermore it must be borne in mind, that these wards of the state are not the real menace to the community, since they are almost completely under direct supervision and control. They are, at most, a drain upon their respective communities. The real danger, the manifest source of anxiety, should be those who are defective but whose conduct and behavior have as yet not made it necessary to place them under supervision and control. It may be safely assumed that there are just as many of these various groups still in possession of their individual liberties as will be found to be wards of the state.

In considering this problem, and an enormous problem it is even when viewed from a most favorable aspect, one must bear in mind that not all of these individuals possessing defective or an otherwise unstable make-up, have been rendered thus because of having been born so, nor having once become wards of the state do they ever after remain or continue as such. There are some, who, because of weaknesses or predispositions in their constitutional make-up, whether the result of inheritance or of sickness in early life, do not possess the stability of organization of their more favorably endowed competitors in the struggle for existence, hence are unable to withstand the onslaughts of the trials and difficulties of life, so fall by the wayside and demand the care of their more fortunate associates. Some of them, thanks to the recuperative powers of Mother Nature, are able to return, at least for a time, to their previous station in life, but the great majority of them must be looked upon as being defectively endowed or constructed. In this group should be included the epileptic, who, because of the increasing stringency of the demands of industrial life, is finding it more and more difficult to find a sphere of suitable work which will enable him to work out an independent existence.

#### PROBLEM OF RESPONSIBILITY

What can, what shall be said of the inmates of our penal and correctional institutions? Of the criminal, of the incorrigible, of the pervert as individuals mentally deranged or mentally de-

fective? There are many viewpoints in regard to this question and only time and study of the underlying psychological make-up will determine the proper answer to these questions. Many undoubtedly are either defective or warped mentally, at least temporarily, and this fact is probably responsible for the common idea, that underlying the motive in the carrying out of any un-social or anti-social act is to be found a defect or derangement of the psychic organization. But it would require rather a startling or radical modification of the present conception of the responsibility for the acts of many of these individuals to accept or adopt the viewpoint that all are mentally warped and should not therefore be held entirely responsible. Whatever may be the final conclusion arrived at, one fact seems probable, that the conditions and requirements of our existing social organization is to some extent responsible for the actions, attitudes, and behavior of its members, even where mental disease or deficiency is evident.

What is to be said of the juveniles in our correctional institutions? Are they defects by heritage? Is their condition the result of previous illness? Or are they the unfortunate victims of their environment, their education and training? Unquestionably there are some to be found who belong to each of these classes, but a thorough psychological study of them will show that many of them are defective mentally, yet are called upon by existing conditions to assume the obligations and responsibilities of the normal individual. Is this just to these unfortunates? Can it be said that society as at present constituted is meeting out justice to them when it forces them to carry them out as prescribed, and failing in this, punishes them accordingly? Is it a wise policy to wait until these unfortunates come into conflict with their social environment before placing them under the care and protection of the state as its wards? Is it not true that to wait until these conditions develop, it becomes a much more difficult task to correct faulty tendencies and habits? Would it not appear to be exercising better business management, wiser judgment, and more humanitarian qualities, that appropriate supervision, care, education and training be given at a time when the potentialities are more pliant and plastic and more easily directed along healthier channels of life's pathway?

In directing your attention to these various groups of the wards of the state it must be remembered that the great majority have become such wards because their actions and behavior brought them into conflict with the social standards and requirements of their environment, or made them a burden or menace to the social community of which they formed a part. The state willingly and sympathetically accepts and assumes the responsibility for their care and protection, and Indiana is probably among the fore-

most of the states in determining and carrying out measures tending to relieve their distress, to improve their conditions, and to render their lives more comfortable and pleasurable. Much of the credit for these results must be attributed to the humanitarianism and philanthropy of those who have been selected or who voluntarily take an interest in the welfare of these unfortunate afflicted beings and too much credit can not be given them for what is being accomplished. Every encouragement, every assistance possible should be given them to carry on their noble work.

#### THE REAL UNDERLYING PROBLEM

But putting aside the humane, the philanthropic, the charitable, the social and the medical phases of this problem and looking at it from a purely economic standpoint, do all of these measures tend in a material way to lessen the burden upon the community? Do they tend to diminish the development or occurrence of the abnormal conditions mentioned? In other words do they strike at the root of the evil, so that if present methods of dealing with them are followed patiently and perseveringly, one may hopefully look forward to a time when this burden and drain upon society will be noticeably lessened or ameliorated. Complete elimination is out of the question because it is beyond the realm of human power or ingenuity.

It must be evident to any student of this problem that the great source from which these difficulties come, is not so much those who are already wards of the state as it is that large number, perhaps, just as large as that in our institutions, who are similarly constituted but who are exercising all of the rights and privileges of the normal person. An illustration of this type will be given farther along. This group will be found to constitute the chief fountain-head from which come the majority of those who ultimately become state wards, and before one can hope to lessen in a material way the burden of society in dealing with this problem, their activities and proclivities will also have to be restricted or curtailed in some way.

If these facts be true, the question naturally arises, are there not some other measures that can be determined and utilized that will strike at the root of the evil, rather than taking care of the evil after it has arisen. In attempting to answer this question it is necessary to determine the fundamental conditions which may be regarded as causative factors.

#### HANDLING MENTAL DEFECTIVES

Taking up the question of the mental defective: *first* it must be recognized that when once the mental defect has arisen whether due to developmental deficiency or to inhibition or interruption of the developmental processes by disease after birth, the defect is a permanent thing. It is beyond human power or skill to develop a normal

brain and mind from a brain lacking in some of its structural elements, or in which certain structures have been destroyed by disease or injury. As an illustration of this type of individual, to show what results may be expected, attention is directed to a family in this city. Both parents are hard-working, honest citizens of German extraction, who by frugal living and strict economy have been able to earn an independent livelihood and acquire a modern home of their own. There were six children in the family. One of them at the age of 17 became acutely disturbed mentally necessitating confinement in the insane hospital, where, after some months, the disturbance subsided permitting of his release and return to the social life of his immediate environment, since which time he has been able under the supervision and management of a superior to earn an independent livelihood as a general laborer. It will perhaps be surprising to learn that he passed muster before the various conscription boards during the recent draft and apparently performed the military duties required of him satisfactorily, but was not considered suitable for service abroad. The second son was backward in his school work and at the age of 18 also developed active mental disturbances, necessitating his committal to the hospital for the insane, from which he was released after 18 months, but for a long time was unable to apply himself to any sustained work, rather tending to pass his time frequenting immoral resorts where he contracted venereal disease, would not remain very long at any one place, resenting criticism, supervision, and discipline. He also ran away from home several times, sometimes returning of his own accord, at others prevailing upon his parents to send him the means to enable him to return. The next two children were twins and were drowned before any reports of their work at school was obtained. The two younger boys were both so backward in their school work, that it was necessary to send them to one of the city's special schools for backward pupils.

It can be readily comprehended that this type of family is anything but an asset to the social, economic, intellectual or spiritual life of any community. Furthermore, in this type of defective makeup, there is no science or skill that can replace the deficiency with a normal mentality, hence any efforts put forth to lessen its frequency must appreciate fully this fact, that the only way this can be done is by preventing the propagation of offspring by those who are already defective. But after they are born, much can be done in giving an education and training appropriate to their inherent potentialities, so that under proper supervision and management many of them can be at least self-supporting, but who, if left to their own resources sooner or later become a menace to society and a drain upon economic life of the community of which they form a part.



## IMPROVING ENVIRONMENTAL CONDITIONS

But there is also a large group of defectives who are such because of the unhygienic, unsanitary conditions of their environment and unhealthy lives of their parents, as well as the result of improper care and protection during early infancy and childhood. In the struggle for existence too many mothers are compelled to suffer privations and to submit to sacrifices which impair not only their own health, but also interfere with the processes of development of their offspring. The developing organism is deprived of some of the factors which are essential for the creation of a normal body and so a normal mind. Much can be done, much is being done, but there is still much to be done along preventive lines that will tend to materially lessen the defective conditions due to these causes. The importance of remedial measures applying along these lines has been recognized by many governmental authorities as is indicated by the fact that nearly every state in the union has in its service its child-welfare department. Every encouragement should be given this branch of the state's health activities and it should call for the most active co-operation and most liberal support of society as a whole.

## MORAL DELINQUENCY

In regard to the moral delinquents it is becoming apparent to many students of this question that at least a part of the fault lies with existing social and educational conditions and requirements. There is a failure to recognize certain trends and tendencies in the behavior and disposition of these individuals in early life when their natures are more amenable to being moulded or directed along normal channels; or if recognized, a failure to correctly interpret or properly understand their significance. As a result they grow up misjudged and misunderstood, out of touch and out of harmony with their environment, ultimately driven by the force of circumstances to adopt a course that follows the line of least resistance, and to acquire habits that bring them into conflict with the standards imposed upon them by that environment and so become wards of the community. Many of these have never been taught to appreciate and recognize the duties and obligations they owe to their fellow creatures, or to respect the rights of others, but rather have been imbued with the fundamental idea that their own selfish desires and their gratification is the main project in life. While it is true that the previous methods of dealing with this type of individual have proved unsuccessful and inappropriate, it is also very questionable whether the present so-called philanthropic methods will accomplish much better results. In the majority of cases it will be found that the old adage: "It is difficult to teach an old dog new tricks," is very applicable here. It is too late to remould a nature that has already acquired definitely-formed characteristics. To remedy this weak-

ness in our social and economic life, it will be necessary to give more thought and attention to these individuals earlier in life.

## WHAT REMAINS TO BE DONE

Thus far attention has in the main been directed to those individuals who have required state supervision and control. As has already been intimated there is just as large a number who are exercising all the rights and privileges of the normal individual yet who are a most potential source of supply of this type of humanity. What can, what shall be done with them? Something must be done if society is to expect any lessening in the enormity of the problem.

Enough has been said to indicate the importance of this problem with which the state has to deal and to show that present methods of dealing with it are not tending to materially lessen its occurrence or the burden that it occasions. It is evident that before this result can be achieved other means will have to be thought out and adopted. It is rather a strange situation to see the human family treat so lightly and so carelessly the most vital factor of its existence, *namely*, its health. Not until it is lost or until its machinery becomes entangled do they seem to realize that first consideration and attention should be given, not to the taking of some remedy to relieve distress or to bring about a re-adjustment of the disturbance that have been created, but to correct the habits of life, to study the laws of nature, and to give some attention to meeting its requirements. These should be inculcated as soon as the individual is born and carried out consistently and methodically during the developmental period of every individual.

More consideration must be given to guarding and protecting the mothers during the child-bearing period, to the infant in its helpless state while it is wholly at the mercy of its environment, and to the child when its nature is being moulded and transformed into a thinking, creative being. Is it too much to ask, is it too much to expect, is it not a thing to be desired, that every child should be regularly examined, and a detailed record kept thereof, at least once a year, oftener if possible, so that it may be given and receive such attention as will tend to guide it along the healthier channels in its growth and development. We see this procedure encouraged and supported liberally so far as concerns our horses, cows, sheep, pigs, grains and so forth. They are given foods believed best for their growth and development, they are recorded and pedigreed from generation to generation. If this is a wise measure when applied to animal and vegetable life how much more so should it be when applied to, such a highly organized form of life as a human being, endowed with the nobler faculties of judgment and reason, of morality and spirituality.

The answer to these questions rests with so-

ciety as a whole, and particularly with us as their advisors in matters relating to the health not only of individuals but also of society in general. The public looks to us to give it the information that will enable it to understand and to deal more intelligently with this problem, so that by its influence and authority it can demand the institution of such measures as will ultimately lessen materially this feeble-minded problem.

608 HUME-MANSUR BLDG.

## OHIO PUBLIC HEALTH NOTES

Charging that high rents and poor housing conditions in Cleveland are contributing greatly to the city's mortality rate, the local health department has undertaken an investigation of more than 1,500 complaints of rent profiteering, many hundreds of which also claim unsanitary conditions. Excessive rents are said to be throwing many families together, causing crowded homes and resulting in the spread of disease. In the solution of the problem, the fair price commission is adjusting the matter of rents with landlords, who are also ordered to make repairs and improve conditions conflicting with the city health code.

—A special venereal disease clinic for women and children was opened in Akron recently and operates at least three days a week. Out of 2,000 volunteer applicants for clinic treatment at the city detention home 50 per cent. were women, emphasizing the need for such a clinic.

—Toledo children between the ages of two and six years have an opportunity for free medical examination and advice at a dispensary maintained by the District Nurse Association of that city on Wednesday morning of each week. The association has previously operated baby clinics but the child of pre-school age has had no medical supervision.

—A constructive health and welfare program outlined for the coming winter by Dr. C. W. Chidester, Delaware health commissioner, with the cooperation of the Delaware Health and Welfare League, includes (1) raising of a fund of \$2,210 to defray expenses not provided for in the health budget; (2) physical examination of school children; (3) organization of first aid classes among teachers of public schools; (4) survey of crippled children; (5) weekly articles in newspapers on health topics; (6) contagious disease prevention campaign; (7) addresses on hygiene and sanitation in schools.

—Creation of a trust fund of \$250,000 for the University of Cincinnati Medical College, the income from which is to be used for the maintenance of a department of pediatrics, was an-

nounced in October, as the gift of Mrs. Mary M. Emery to the endowment fund of the University. The gift stipulates that the new department shall be known as the B. K. Rachford Department of Pediatrics, in appreciation of the work done in this branch of medicine by Dr. Benjamin K. Rachford of Cincinnati.

—Following a movement by the Youngstown health department in which 6,500 local school children were vaccinated last May and June by physicians employed by the department, and about 1,000 others by family physicians, plans were made in late September for the vaccination of the remaining 5,000 unvaccinated children, including beginners.

—Dr. Haven Emerson of New York, under whose direction the Cleveland hospital and health survey was made last winter, assumed his duties as head of a public health council organized by the Cleveland Welfare Federation, November 1. The health council consists of representatives of all of the agencies in the city having health programs, and it is its purpose to correlate and coordinate the activities of these agencies and cooperate with the city health department.

—Of 1,401 Canton school children examined in 16 schools in September by Dr. E. O. Peterson, 1,136 were found to be normal. Three were found mentally deficient; 108 suffered eye defects; 30 with tonsillitis; 30 with pediculosis and 16 with enlarged glands. Dr. Peterson recently resigned as school physician after two years' service.

—The monthly bulletin of the Dayton Division of Health states that 3,289 food handlers were examined during September. Of this number 3,236 were passed, 28 were rejected and 23 received temporary passing cards. The Division's work has been extended through the action of the school board recently in transferring all medical supervision of children in the public schools to the Division of Health, subject to such details of administration as may be jointly adopted by the two bodies.

### Post-Graduate Meetings

Appreciation of the opportunity for post-graduate study offered by the Association's Committee on Medical Education has been manifested by the large attendance which has featured every meeting of the series held during the present season. Many expressions of approbation have been heard concerning the lecture on "Pediatrics" which is being presented by Dr. H. J. Gerstenberger of Western Reserve University, Cleveland, under the committee's auspices.

At this writing successful meetings had been held at Athens, Chillicothe, Canton, Dayton, Marion, Zanesville, Gallipolis, Canton and Youngstown, including the physicians of fifty-six counties. Tentative plans have been made for meetings at Lima and Steubenville which will probably conclude the 1920 series.



## Formulation of Crippled Children Program Presents Big Problems to Association Committee and Cooperating Agencies

Progress reported by health commissioners of the state in the survey of crippled children which is being made as a preliminary step to the extensive program which will be undertaken by the State Association in conjunction with the Institute of Public Efficiency, the State Department of Health, Board of State Charities, State Department of Public Instruction, and the Ohio Society for Cripples organized by the Rotary Clubs, indicates a keen interest in this subject. Public interest in the care of cripples has been steadily increasing during the past few years and has now reached a point where it is believed the people of Ohio are ready to support a comprehensive program.

As the time for active work in this field approaches, the committee, headed by Dr. Albert H. Freiberg of Cincinnati, and the other agencies interested are cognizant of the magnitude of the problem. In working out a plan of action they realize that a program which will in any way cope with the situation must include adequate medical and surgical care, opportunity for education and an employment service which will provide reasonable assurance of partial or entire self-support.

The following tentative analysis of the problems involved and suggestions for solution has been prepared by the Ohio Institute for Public Efficiency for Dr. Freiberg's committee and is now under consideration. While this program has not been officially adopted and may not be found practicable in all details, it presents an excellent working basis and its various possibilities may be developed through discussion.

### A. Medical and Surgical Care

#### 1. DIAGNOSIS. ADVICE AND CERTAIN KINDS OF MINOR TREATMENT

*Service.* One of the first needs in the care of cripples both in cities and rural sections is the early diagnosis and advice made possible through clinics. Many conditions, if taken in early childhood, respond readily to treatment, while if neglected until later in life become much more difficult if not impossible to improve.

The clinic is also of value as an agency for follow-up treatment after acute surgical operations when the patient has been sent home for convalescence.

It is of value also in the home treatment of non-acute cases which may not need surgical attention.

*Agencies.* In the larger cities, such clinics might be provided by hospitals, by district nurses or other public or private agencies. Good orthopedic service would, of course, be essential. In rural sections, the county health commissioner's office would seem to be a logical headquarters

from which an orthopedist could work at regular intervals and where he could have the help of the county public health nurses. The orthopedic service and the nursing and clinical service might be financed publicly by state, county, or city or it might be financed from private sources.

#### 2. ACUTE SURGICAL CARE

*Service.* Such cripples as need surgical operations will require expert orthopedic service together with the usual facilities offered by hospitals. In some cases special apparatus and equipment is required in addition to that usually found in surgical hospitals.

*Agencies.* Acute surgical care may be provided in a number of different ways such as:

- a. General hospital
  - (1) Public or private
  - (2) For all ages; for children only; or for adults only.
  - (3) With or without special orthopedic cottages or wards.
- b. Special orthopedic hospital
  - (1) Public or private
  - (2) For all ages; for children only; or for adults only.

Acute surgical care may be *financed* in several ways such as:

- a. Direct public operation
  - (1) By state, county or municipality
  - (2) By state assessing cost on county
  - (3) By county or city receiving grants from the state to cover part or all of the cost of operation and maintenance.
- b. Direct private operation
  - (1) By private agency without governmental subsidy.
  - (2) By private agency with state, county or city subsidy to cover part or all of the cost of operation and maintenance.

#### 3. CONVALESCENT AND NON-ACUTE CARE

*Services.* Convalescent care following acute surgical operations is one of the important services to be provided for cripples. Many cases which have not needed surgical operations require the most careful attention also if satisfactory results are to be obtained. In both instances care must be provided for long periods lasting from two weeks to eighteen months and even longer.

During this period academic and vocational education is needed, varying in extent, with the mental and physical condition of the child or adult and in character according to the aptitudes of the patient and the nature of his disability. Careful medical attention is also needed through-

out the period of convalescent and non-acute care.

*Agencies.* Convalescent and non-acute care may be provided in any of the ways described for acute hospitals such as:

- a. In the same hospital providing for acute cases; i. e.
  - (1) General hospital
    - (a) Public or private
    - (b) For all ages for; children only; or for adults only.
    - (c) With or without orthopedic cottages or wards.
  - (2) Special orthopedic hospital
    - (a) Public or private
    - (b) For all ages; for children only; or for adults only.
- b. In a special separate hospital intended only for convalescent and non-acute cases; i. e.
  - (1) General hospital
    - (a) Public or private
    - (b) For all ages; for children only; for adults only.
    - (c) With or without special orthopedic cottages or wards.
  - (2) Special orthopedic hospital
    - (a) Public or private
    - (b) For all ages; for children only; or for adults only.

Convalescent and non-acute care may be financed in any of the ways suggested for financing acute care as:

- a. Direct public operation
  - (1) By state, county or municipality
  - (2) By state assessing cost on county
  - (3) By county or city receiving grants from the state to cover part or all of the cost of operation and maintenance.
- b. Direct private operation
  - (1) By private agency without governmental subsidy.
  - (2) By private agency with state, county or city subsidy to cover part or all of the cost of operation and maintenance.

Convalescent and non-acute care may also be provided at home in which case there would be needed:

- a. Careful supervision by
  - (1) A trained orthopedist
  - (b) A visiting nurse
- b. Frequent visits to an orthopedic clinic.

This home service may be financed publicly or privately. In Boston, orthopedic patients are in most cases sent home after from two to four weeks of hospital care. The patients, however, are very closely followed up, the out-patient departments of Boston hospitals being developed to a high degree of effectiveness. General family case work is also highly developed in Boston,

which may have much to do with the extensive use of home treatment for cripples.

In Illinois, the State Department of Health, about a year ago, organized orthopedic clinics in a number of the smaller cities of the state, in co-operation with local nursing and other social agencies. As a result, home treatment in rural districts and smaller cities has been made possible to a very considerable extent.

#### 4. PHYSIO-THERAPEUTIC TREATMENT

*Service.* Physio-therapeutic treatment is recognized as an important factor in the care of cripples. This treatment includes the comparatively simple as well as the more advanced forms of massage and muscle training, the use of various kinds of gymnasium apparatus, hydrotherapy, electric light and steam cabinet treatments and various other treatments some of which require expensive apparatus while others require only trained service without any apparatus. It is used in cases convalescing from acute surgical operations and in cases which have undergone no operation, to assist in correcting serious deformities as well as for minor disabilities.

*Agencies.* Physio-therapeutic treatment may be supplied by a number of agencies such as:

- a. Any of the hospitals mentioned above for acute surgical treatment.
- b. Any of the hospitals mentioned above for convalescent care.
- c. Any clinic within a hospital or outside.
- d. Physio-therapeutic nurses working in special classes for cripples in the public schools.
- e. Physio-therapeutic nurses working in the home.
- f. A special place separate from any hospital, clinic or other agency provided with special equipment and apparatus to which patients might be brought from various places.

#### 5. HOME TREATMENT

*Service.* As stated in the previous section the institutional care needed for cripples, aside from acute surgical cases, depends in large measure on the extent to which home treatment may be resorted to. This in time depends on the cooperation which can be secured in the home, and the kind of outside service which can be made available to the home.

These same factors determine the extent to which home treatment may be a substitute for hospital treatment and how far it may serve merely as a follow-up after possibly long continued hospital care.

Frequent visits by orthopedic and physio-therapeutic nurses may be required.

Regular oversight by a competent orthopedist either in the home or at a clinic should be available. Willingness and ability on the part of the



patient's family to follow instructions is essential. At least a moderately good general standard of living in the home is important also to successful home treatment.

*Agencies.* An agency like a district nursing association, the outpatient department of a hospital, an association for crippled and disabled or some other agency which can provide trained orthopedic and physio-therapeutic nurses will be essential if home treatment is to be effective. Clinics to which patients who can be moved may be taken for supervision and treatment by an orthopedist will also be essential.

These clinics will be the same as those referred to under A1 for diagnosis, etc. They will give advice before operations as well as provide means for follow up afterward.

An agency such as a hospital, an association for crippled and disabled or some other public or private agency which can furnish the services of a competent orthopedist for home visits will be needed where the patient cannot be brought to a clinic.

#### 6. BRACES AND APPLIANCES

*Service.* Many orthopedic cases require some sort of brace or appliance. The success of an operation or the correction of a deformity without operation often depends on ability to secure properly made braces or appliances. Skilled service for supplying these braces and appliances to patients in different parts of the state is therefore important.

*Agencies.* Probably each of the seven largest cities in Ohio should have a brace shop which could serve the surrounding rural districts. These shops could be operated in several ways, as:

- a. A department of a general hospital.
  - b. A department of a general agency for serving cripples such as the Association for Crippled and Disabled in Cleveland.
  - c. An independent institution organized either for profit or not for profit.
  - d. By the government—state, county or city.
- Brace shops may be publicly or privately financed. Public financing may take the form of
- a. Direct operation
  - b. Subsidizing of private shops by state or local governments
  - c. Making of grants by the state to local governments.

#### B. Education

##### 1. ELEMENTARY AND SECONDARY EDUCATION, PRE-VOCATIONAL AND VOCATIONAL TRAINING AND VOCATIONAL GUIDANCE

*Service.* Since medical treatment of cripples frequently requires long periods of time and since the nature of their disability makes it difficult or impossible for cripples to attend ordinary schools, special provision must often be made for giving a cripple the education he needs. Educational service will be needed (a) in acute surgical hospitals where some patients are detained for sev-

eral months; (b) in convalescent hospitals where patients are frequently detained for six, twelve and eighteen months or even longer; (c) in special classes in public or private schools to which transportation may be furnished when needed; (d) at home for cases which cannot be transported to school or in smaller communities where there is not a sufficient number to justify the expense of transportation. The education provided should include elementary and secondary education, prevocational and vocational training and vocational guidance. The course should be elastic enough to fit the needs of the individual cripple.

In all forms of education, the needs of the cripple are no less than those of the normal person. In the matter of vocational and prevocational training and vocational guidance, the needs of the cripple are even greater, because of the limitations imposed by his disability.

*Agencies.* Education may be furnished by several agencies, as:

- a. By local Boards of Education supplying teachers and educational facilities in the various places mentioned above under "Service."
- b. By the state or local governments other than Boards of Education providing teachers, etc., for hospitals or other institutions publicly or privately owned and operated.
- c. By private agencies providing teachers, etc., for hospitals or other institutions publicly or privately owned and operated.

Education may be financed in a number of ways as:

- a. By local Boards of Education
- b. By the state or local governments other than Boards of Education, directly or through grants or subsidies to local public or private agencies.
- c. By the state through assessments of costs on local governments from which the students come.
- d. By private agencies.

#### C. Employment

##### 1. FINDING EMPLOYMENT FOR CRIPPLES

*Service.* Several kinds of employment service are needed for cripples, dependent on the nature and extent of their disability and on their own initiative and force of character. The cripple with a minor disability or with vigorous initiative will need no facilities different from those which may be needed by a normal person. The cripple with a more serious disability or with less personal initiative will require more help and help of a somewhat specialized nature. There are some cripples who are unemployable in ordinary industry and must have work taken to their homes or must have it provided in special work shops where the disability will be given every consideration.

*Agencies.* There are several employment agencies which may serve the cripple, as:

- a. A general employment bureau, public or private.
- b. An employment bureau organized especially to serve cripples, public or private.
- c. A workshop for cripples who are not employable in regular industry, public or private.
- d. An agency to provide home work for unemployables who cannot leave home, public or private.

#### D. Asylum Care

*Service.* A comparatively small proportion of cripples are practically hopeless cases for whom nothing can be done. Some of these are so helpless as to require constant attention. Some, of course, can be cared for in their own homes but in other cases the economic condition of the home is such as to make proper care impossible and other facilities necessary.

*Agencies.* There are several kinds of agencies which may provide asylum care for cripples, as:

- a. Special institutions—public or private, state or local.
- b. General institutions—public or private, state or local—as for example county infirmaries and children's homes or such private homes as the state Masonic Home or a local orphanage.
- c. Placing out system through boarding homes for individuals, publicly or privately supported.
- d. Convalescent and even acute orthopedic hospitals sometimes provide asylum care for practically hopeless cripples though it is not their primary function to do so.

#### E. Miscellaneous

##### 1. SOCIAL SERVICE

*Service.* Throughout the entire program for the care of cripples, social service is of great importance because most of the cripples requiring attention come from families where ignorance and a generally low social and economic status exists. As stated before the necessity for institutional care with its expense and its other objectionable features may be greatly reduced by means of effective social service in the home.

*Agencies.* Social service may be provided by a number of agencies as:

- a. District nursing organizations in the larger cities.
- b. Public health nurses especially in rural districts where agencies like those mentioned above do not exist.
- c. Outpatient departments of general and orthopedic hospitals.
- d. A special central coordinating agency like the Association for the Crippled and Disabled in Cleveland.

- c. General family case work agencies in the larger cities such as the Associated Charities, the Jewish and Catholic Charity Organization Societies, etc.

Special service may be publicly or privately financed. Public finances may be provided by counties or cities or by the state and may take the form of direct employment of workers or of subsidies to privately managed organizations or of grants by the state to local governmental agencies.

##### 2. TRANSPORTATION

*Service.* The need for transportation arises in nearly every part of the program for the care of cripples. It is needed to get cripples to hospitals, clinics or brace shops, to special classes in the schools and in many cases to and from employment. Lack of transportation may prevent a cripple from profiting by many of the facilities which might cure or greatly improve his condition.

*Agencies.* Transportation may be furnished in a number of different ways as:

- a. By any private or public social agency such as those mentioned in the next preceding section.
- b. By an agency which centralizes and specializes in this service.
- c. By the Board of Education for transportation to and from special classes.

Like other kinds of service for cripples, transportation may be publicly or privately financed; if publicly either direct or through grants or subsidies.

##### 3. MISCELLANEOUS OTHER

*Service.* There are a number of kinds of service which, while in some respects not essential, may add much to the pleasure and to the welfare of cripples. Such service would include automobile rides, summer outings, and special entertainments of various kinds for various groups.

*Agencies.* Private agencies of various kinds may provide this service such as automobile clubs, Woman's Clubs, luncheon clubs, etc. Convalescent hospitals may also provide this service through public or private financing.

\* \* \*

In any general program providing care and treatment for crippled children in Ohio, account should be taken of the work already being done in this field by the state and local governments and private agencies. In the aggregate a good deal of orthopedic service is now available in the state but it is concentrated almost entirely in a few of the largest cities. The sections of the state not easily accessible to the large cities are at present practically without orthopedic service, and even in the large cities the service is not considered adequate. In Cleveland, for example, according to the recent hospital survey, there are less than 50 beds available for acute orthopedic



cases, while the survey recommends that 370 beds be provided.

The kinds of service now provided for crippled children by the state government include:

#### 1. STATE DEPARTMENT OF HEALTH

- a. The Division of Child Hygiene of the State Department of Health is developing a state wide registration of crippled children through the county commissioners and the public health nurses.

#### 2. SPECIAL COMMISSION APPOINTED BY THE GOVERNOR

- a. A commission appointed by the governor in accordance with a state law passed in March, 1917, is seeking a site on which to erect a building "for the medical and surgical treatment and polytechnic and literary education of the indigent crippled and deformed children of the state, under the age of eighteen." \$90,000 was appropriated for this purpose, but up to the present time no action has been taken.

#### 3. BOARD OF CHARITIES

- a. The Children's Welfare Department of the Board of State Charities is now ready to administer a subsidy provided by the last General Assembly for financing the care of indigent cripples in public or private hospitals. The appropriation is very small, but a precedent has been established. The law provides that when the state institution described in the preceding section is ready for use, "the Board of State Charities may terminate all contracts made under this act and transfer such children under its care to such institution, unless such institution cannot care for all such children who are eligible for admission." Whether or not the state shall adopt the granting of subsidies as a permanent policy in connection with the care of cripples is therefore left open for future determination.

#### 4. STATE DEPARTMENT OF PUBLIC INSTRUCTION

- a. The State Department of Public Instruction is paying not to exceed \$150 per pupil per year for that part of the expense of special classes for cripples in the public schools which exceeds the cost of regular classes. Five cities are making use of this grant, namely Cleveland, Cincinnati, Toledo, Dayton and Elyria. State law makes this aid available to any Board of Education which will meet the requirements of it.

#### 5. STATE BOARD OF EDUCATION

- a. The State Board of Education is seeking to secure the federal aid provided recently by Congress for the rehabilitation of industrial cripples.

The kinds of service now provided for cripples by local governments include:

#### 1. HOSPITAL SERVICE

- a. The Cincinnati General Hospital and to a less degree the Cleveland City Hospital provide orthopedic service. In Cleveland a small amount of separate convalescent care is provided by the city at Warrensville. In some other cities a certain amount of orthopedic service is made available either in city hospitals or in private hospitals where the cost of the service is paid by the city.

#### 2. EDUCATION

- a. As stated above the Boards of Education in five cities—Cleveland, Cincinnati, Toledo, Dayton and Elyria—provide special classes for cripples. In most of those cities transportation is also furnished by the Board of Education. As explained in Section A4, the state bears a considerable part of the expense of these classes through a grant of not to exceed \$150 per pupil per year.

#### 3. MISCELLANEOUS OTHER

- a. Outside of the rather isolated cases mentioned above, local government in Ohio is doing little and in most cases nothing at all for cripples, except as occasional cases are placed in Children's Homes or Infirmarys or in hospitals at public expense.

The kinds of service now provided for cripples by private agencies include:

#### 1. HOSPITAL SERVICE

- a. In most of the larger cities, private hospitals afford facilities for orthopedic surgery. The adequacy of these facilities varies greatly in different cities and in different hospitals.
- b. The Gates Hospital at Elyria is the only hospital in the state devoted entirely to orthopedic surgery for crippled children.
- c. In a very few cities, separate hospital facilities for convalescent and non-acute care are afforded, notably in Cleveland at Rainbow Hospital.

#### 2. CLINIC SERVICE

- a. In a number of the larger cities orthopedic clinics are conducted by private agencies either in connection with hospitals or separately by district nurses and other agencies.

#### 3. EMPLOYMENT

- a. In a very few cities, private agencies pay particular attention to providing employment for cripples. The Association for Crippled and Disabled at Cleveland operates a special work shop for cripples, provides some home work and assists cripples to find employment in industry.

## 4. ASYLUM CARE

- a. Some private institutions like Catholic orphanages or fraternal or church homes for children provide a limited amount of asylum care for crippled children. The Holy Cross Home, operated by the Episcopal Church in Cleveland, is a notable example of this sort of institution.
- b. Some private homes for old people admit cripples for asylum care, though this is rare.
- c. Some orthopedic hospitals, in exceptional cases, provide the equivalent of asylum care because they don't know what else to do with some patients.

## 5. MISCELLANEOUS OTHER

- a. District Nursing Associations, Associated Charities and other more specialized agencies like the Cleveland Association for the Crippled and Disabled are doing a variety of services for cripples in different places with varying degrees of adequacy. Such services include:
  - (1) Home treatment
  - (2) Physio-therapeutic treatment
  - (3) Supplying of braces and appliances
  - (4) Family rehabilitation
  - (5) Transportation
  - (6) Summer outings
  - (7) Entertainments
- b. The Ohio Society for Crippled Children was organized by the Rotary Clubs of the state early in the current year. It has as its purpose the stimulating, organizing and crystalizing of public sentiment throughout the state so that more adequate care may be afforded crippled children. A trained orthopedic nurse has been employed as director of the work and the state has been tentatively divided into eight districts for organization purposes.

So far as is known, no state has yet developed a comprehensive program for the care of cripples. A number of states, however, have provided hospitals for acute or convalescent care of cripples or both, notably Minnesota, Massachusetts, Nebraska and New York. Illinois about a year ago undertook to develop a different kind of service for cripples through the establishment of 23 clinics in the smaller cities of the state and the creation of a Bureau of Orthopedics in the State Department of Health which cooperates with the clinics. Nebraska and Illinois afford examples of institutional and non-institutional methods, and their experiences should prove very helpful to the Ohio agencies interested in the solution of this problem.

\* \* \*

As immediate steps in Ohio, the prospectus of the Ohio Institute of Public Efficiency suggests:

1. The establishment of a Bureau of Orthopedics as a part of the State Department of Health.

Such a bureau might consist at the outset of an orthopedic surgeon, a nurse and a stenographer. It would have the responsibility for organizing and supervising orthopedic clinics in parts of the state not easily accessible to those larger cities in which orthopedic service is already available. In larger cities it might supervise orthopedic clinics to some extent but in a more general way than in the rural districts. In addition there might be transferred to it the responsibilities now placed with the Board of State Charities for administering state aid to local, public and private hospitals for the care of cripples.

2. The establishment of a state Commission for the Handicapped to take over—

- a. The building of a state institution for crippled children, which the present commission has wisely deferred owing to the uncertainties of the past few years and the complications of the problems involved.
- b. The management of such institution, now vested by law in a separate and as yet unappointed board.
- c. The management of the state Schools for the Deaf and Blind. These schools, now under the Ohio Board of Administration, have but little in common with the other institutions under that board, except matters of routine housekeeping. The technical problems of education and placement are quite distinct from those relating to the insane, feeble-minded and delinquent.
- d. The activities now under the state Commission for the Blind.

The activities just enumerated constitute a unified group, and the suggested organization would substitute one commission for three.

3. The appointment of a supervisor of education for the handicapped in the department of Public Instruction whose duty it would be not only to supervise the special classes already organized in the public schools for blind, deaf and crippled but to stimulate the organization of more classes where they have not yet been provided. At present the supervision which the State Department of Public Instruction is able to provide is entirely inadequate to insure effective teaching in return for the financial assistance the state is giving these classes. In this connection it would probably be desirable to increase the maximum grants to local communities for special classes for the crippled so as to be on a par with the grants for the blind.

4. Through co-operation of the above state agencies with each other and with private agencies such as the Ohio Society for Crippled Children, the Ohio State Medical Association, and others, the development of local facilities, public or private, may be stimulated. These facilities should include brace shops, physio-therapeutic equipment, home nursing service, transportation facilities and miscellaneous social service agencies.





The regular meeting of the State Medical Board was held in Columbus on October 5. Business transacted included the granting of 33 certificates to practice in Ohio on the basis of reciprocity, hearing of five revocation cases and a review of the prosecution of violators of the Medical Practice Act. Announcement was made that the next examinations of the board will be held on December 1, 2 and 3.

#### REVOCATION CASES

The certificate of Dr. John B. Flack of Cincinnati to practice medicine and surgery in Ohio, was suspended at the meeting of the Board on October 5. Opportunity will be given his attorney to appear before the Board at its January meeting to show cause for re-instatement.

The certificate of Dr. Frumentti W. Winters, formerly located in Akron and now resident of New York, was revoked at the October meeting, the specific charge being "lending his name to an illegal practitioner of medicine." Winters was associated with one George Matthew, an unlicensed man conducting an office in Akron.

One physician appeared before the Board to answer charges of gross immorality based upon irregularities committed by him in making insurance examinations of industrial policies. Decision in this case was reserved until the December meeting.

Another physician charged with irregular practice and drug addiction, pleaded guilty to the latter charge and urged in extenuation, that he had recently taken treatment in a sanitarium and was cured. Final disposition of this case was postponed until the January meeting, with the advice that he surrender his narcotic privileges.

One physician, cited to explain his conduct in violation of the prohibition laws, admitted his guilt, stated he had paid a fine, no longer possessed a permit to prescribe alcoholics and upon his promise to refrain therefrom, the case was continued.

#### PROSECUTIONS

The report of the Cleveland inspector of the State Medical Board for the year ending June 30, 1920, shows 119 investigations productive of definite results.

Since our last issue one B. Jackson, negro, Cleveland, was fined \$50.00 and costs in the Municipal Court of Cleveland for illegal medical practice.

In Youngstown Mrs. Anna Schumm, registered midwife; was fined \$50.00 and costs and given 60 days for violation of the Medical Practice Act;

S. M. Van Orsdell after being fined \$50.00 and costs promised to discontinue the sale of radio articles; and Valka M. Toscek, licensed midwife, was fined \$200.00 for selling Fargo and Royal remedies, \$100.00 of which fine was remitted.

A number of other cases are pending in the Municipal Court of Youngstown. In addition, fourteen midwives were called to the office of the police prosecutor for a conference and warned to conduct their business within the limitations of their licenses.

At Dayton Tony Carr, unlicensed chiropodist, is under arrest on two counts for practicing without a license.

Harry W. McFarren, manufacturer of patent medicines located at Tiffin, has been arrested in Bowling Green for illegal practice of medicine. Three complaints were filed against him.

#### RECIPROCITY LICENSES

*Leslie Lee Bottsford*, Akron, Ohio. Graduate University of Michigan, 1914; intended residence, Akron.

*George Byron Brown*, Portsmouth, Ohio. Graduate of Bellevue Hospital Medical College, 1897; intended residence, Portsmouth.

*Charles Perry Burke*, Follansbee, West Virginia. Graduate Jefferson Medical College, 1910; intended residence, Martins Ferry.

*Elijah Arthur Calloway*, (colored), Overton, Texas. Graduate Howard University, 1916; intended residence, Akron.

*Ernest William Campbell*, Midland, Pennsylvania. Graduate Western University of Pennsylvania, 1907; intended residence, Warren.

*George Washington Chappell*, (colored), Logan, West Virginia. Graduate Howard University, 1911; intended residence, Toledo.

*Clifford Bailey Farr*, Akron, Ohio. Graduate University of Pennsylvania, 1898; intended residence, Akron.

*Henry James Giles*, Pittsburgh, Pennsylvania. Graduate University of Pittsburgh, 1912. Intended residence, Massillon.

*Henry Allen Halsey*, Wyoming, Ohio. Graduate Rush Medical College, 1907; intended residence, Wyoming.

*John L. M. Halstead*, Chillicothe, Ohio. Graduate Kentucky School of Medicine, 1898; intended residence, Chillicothe.

*David Earl Hawthorne*, Akron, Ohio. Graduate Indiana University, 1919; intended residence, Akron.

*Joseph Kreiselman*, Washington, D. C. Graduate George Washington University, 1919; intended residence, Akron.

*Martin James Larkin*, St. Louis, Mo. Graduate St. Louis University School of Medicine, 1919; intended residence, Toledo.

*Maurice Clock Loree*, Akron, Ohio. Graduate

University of Michigan, 1917; intended residence, *Akron*.

*Francis Xavier McGovern*, Akron, Ohio. Graduate Fordham University, 1916; intended residence, *Akron*.

*William Alexander McIntosh*, Oberlin, Ohio. Graduate Johns Hopkins Medical School, 1919; intended residence, *Oberlin*.

*James Lemuel Martin* (colored), Washington, D. C. Graduate Leonard Medical College, 1906; intended residence, *Youngstown*.

*Charles Koran Maytum*, Cincinnati, Ohio. Graduate University of Iowa, 1919; intended residence, *Cincinnati*.

*Henry Joseph Meister*, Dunkirk, New York. Graduate Cornell, 1916; intended residence, *Warren*.

*Samuel Miller*, Manchester, New Hampshire. Graduate Baltimore Medical College, 1912; intended residence, *Cleveland*.

*Edmund Christopher Mohr*, Toledo, Ohio. Graduate University of Michigan, 1916; intended residence, *Toledo*.

*Cecelia K. Morris*, Akron, Ohio. Graduate Woman's Medical College of Philadelphia, Pennsylvania, 1912; intended residence, *Akron*.

*Norman Charles Ochsenhirt*, Enon Valley, Pennsylvania. Graduate University of Pittsburgh, 1917; intended residence, *East Palestine*.

*Arthur Joseph O'Connor*, Cleveland, Ohio. Graduate Columbia University, 1916; intended residence, *Akron*.

*Benedict Olch*, Cincinnati, Ohio. Graduate Harvard University, 1919; intended residence, *Cincinnati*.

*James Alexander Owen* (colored), Sapulpa, Oklahoma. Graduate Meharry Medical College, 1916; intended residence, *Cleveland*.

*Louis Ernest Payne, Jr.*, Leonardtown, Maryland. Graduate Johns Hopkins, 1917; intended residence, *Toledo*.

*Herman Theodore Schlegel*, Wausau, Wisconsin. Graduate Chicago College of Medicine and Surgery, 1909; intended residence, *Akron*.

*Harry Morris Strachan*, Cleveland, Ohio. Graduate University of Louisville, 1911; intended residence, *Cleveland*.

*Americus Wheaton Tobias*, Elwood, Indiana. Graduate Louisville Medical College, 1892; intended residence, *Marietta*.

*Joseph Julius Wells*, Akron, Ohio. Graduate Cornell University, 1918; intended residence, *Akron*.

*Francis Thomas Williams*, Washington, D. C. Graduate Johns Hopkins University, 1912; intended residence, *Dayton*.

*William Champness Williams*, Columbus, Ohio. Graduate Beaumont Hospital Medical School, St. Louis, 1897; intended residence, *Columbus*.

## Christmas Seal Committee Named

Ohio is now organized for what promises to be a record-breaking campaign for the sale of Christmas seals beginning December 7. The Ohio Public Health Association, under whose auspices the seals will be sold, has announced its Christmas Seal Committee, composed of some of the leading manufacturers and business men of the state.



Heading the committee as state chairman is Mr. Warren A. Myers, Springfield, Ohio, manufacturer.

Mr. Myers has selected the following district chairman: S. O. Richardson, Toledo; A. L. Garford, Elyria; H. H. Timpken, Canton; George E. Bayley, Lima; J. Walter Jeffrey, Columbus; Perry R. Mark, Zanesville; Gordon Rentschler, Hamilton, and Col. Richard Enderlin, Chillicothe.

Allied with this committee of men there will be a woman's committee selected by the Ohio Federation of Woman's Clubs, of which Mrs. J. A. Riebel, Columbus, is chairman. Mrs. Riebel has designated the following district chairmen: Mrs. Chester B. Bliss, Sandusky; Mrs. J. G. Reid, Greenville; Mrs. W. F. Copeland, Athens; Mrs. J. F. Elliott, Coshocton; Mrs. J. C. White, Barnesville; Mrs. F. S. DeCamp, Hartwell, Mrs. L. Steinfeld, East Liverpool.

Mr. A. E. McKee, Columbus, is chairman of educational committee composed of Ohio newsmen. Other members of this committee are: John T. Bourke, Cleveland; E. G. Burkam, Dayton; W. A. Campbell, Lima; James T. Carroll, Columbus; E. E. Cook, Columbus; George B. Frease, Canton; J. W. Faulkner, Columbus; Joseph P. Glass, Dayton; Joseph Garretson, Cincinnati; Erie E. Hopwood, Cleveland; W. O. Littick, Zanesville; Egbert Mack, Sandusky; W. Kee Maxwell, Akron; Don K. Martin, Columbus; S. G. McClure, Youngstown; W. G. Mortal, Somerset; G. W. C. Perry, Chillicothe; Harry E. Taylor, Portsmouth.

## State Medicine

(Continued from Page 793)

more power or give it control of any line of human endeavor, for it already has vastly more power and more widely extended control now than it was ever intended to exercise. But should we go to state medicine and state control of the physical well being of the people that event will mark a calamity which in its far reaching consequences will be irreparable. A state religion would not be more dangerous than a system of state doctors.



# Compulsory Health Insurance, State Medicine, Or What?\*

Hugh Cabot, M. D., F. A. C. S., Ann Arbor, Mich.

It is interesting to note that Dr. Cabot finds the solution of the existing health problem in the community health center, which he favors decidedly as against the lure of compulsory health insurance and the threat of state medicine. In developing the essentials of a satisfactory method of handling public health, while Dr. Cabot realizes the ideals of a closed group hospital he also appreciates the fact that the closed shop is as apt to engender professional and public opposition in medicine as it has in industry. Granted that every practitioner of medicine and surgery should have acceptable standards of competence to do his work in any community health center or hospital, it remains to decide who is to determine these standards and enforce them. Certain organizations within the profession are said to be trying to supersede the authority of the state medical board and the ethical and professional requirements of the state associations. If an individual practitioner is not quite up to the standard of his fellows why should they not bend every energy to his improvement rather than to make him a pariah and an outcast?

IT has perhaps been a weakness of the medical profession that it has not sufficiently exerted its great potential influence in directing or influencing the changes in the relation of medical practice and medical custom to the community. We have on the whole been too apt to regard such things as other people's business and have held the view that the care and management of the sick constituted our whole relation to the community. But it must now be perfectly clear that with the variety of suggested cures for the real or imaginary evils which are believed to surround the practice of medicine we must think clearly and act together and wisely if we are to prevent various developments which we believe to be unsuited to the requirements. Change is in the air. A demand for a closer relation between the public and its health agencies is widespread and proper. Democracy cannot hope to satisfy the claims of its admirers unless it can show success in protecting itself against the diseases of body and mind with which it is threatened.

## SOCIETY GIVES DERELICTS BEST CARE

The present demand for change of some kind has its source in a variety of conditions. Perhaps the most fundamental is a dissatisfaction with private charity as a method of caring for the ills of those who are unable to pay for satisfactory care. The system by which we have provided almost the best skill that the community can afford for the care of the paupers and the derelicts of society has been outgrown. The self-respecting though impecunious citizen demands and has a right to expect that he can obtain care at least equal to the average of medical knowledge without being driven into debt or bankruptcy. Undoubtedly the almost universal adoption of compensation for industrial accidents has started people thinking and they properly inquire why, if they are entitled to protection from accident chargeable against the business in which they are concerned, they are not entitled to insurance against illness chargeable to the same

source. Compulsory health insurance was long ago instituted in Germany and not so long ago the so-called "panel system" of health insurance was put into effect in England. Many people, and particularly those dissatisfied with present conditions, have heard of these alleged panaceas and believe that they know about them, though they are far more apt to hear of their excellencies than of their deficiencies; and, finally the widespread demand for protection against illness is part and parcel of the general restlessness or unsettled conditions and the very human though utterly hopeless desire to get something for nothing.

## COMPULSORY HEALTH INSURANCE

It does not seem essential to enter into any lengthy dissertation here on the much discussed and widely advocated system of health insurance. We are familiar with the claims made by enthusiastic advocates and most of us have come to an opinion in regard to the propriety of such an arrangement. But in order that no doubt may exist as to my own opinion I will briefly note what seem to me overwhelming objections to the system.

*In the first place, as at present advocated in the various bills which are before the many state legislatures of the country, it does not, as far as I am aware, even propose to insure or to care for the illness of the majority of the population. It is not suggested that any of the systems advocated will have any effect in the prevention of disease or in the diminution of its incidence, and yet the casual minded are rather led to believe that in some mysterious fashion such a result will accrue. It is not proposed, as far as I am aware, to apply this system to all members of the community who are or believe themselves to be financially unable to obtain satisfactory medical attention. It is proposed to apply it only to workers in industrial concerns where it can be charged against the cost of the business and thus become a tax upon the community which may be borne without being unduly burdensome. Furthermore, as far as I can judge from the experiments in other countries—and the experiments*

\*Annual Discourse delivered before the Massachusetts Medical Society, June 9, 1920. Reprinted by courtesy of Dr. Cabot and the Boston Medical and Surgical Journal.

*in England appear very enlightening for us—the whole tendency of this method is to promote second rate methods of practice. The fees which the physicians doing this work can be allowed to charge are of necessity low, and this tends to attract chiefly physicians of average or less than average capacity.*

A more serious objection is that it tends to promote what may be called the method of "pill peddling" in medical practice. It tends to perpetuate the methods of one or two generations ago under which the physician made numerous visits but, being unequipped with the machinery for precise diagnosis, as a rule contented himself with treating symptoms and trusting to the healing powers of Nature. The last twenty years has seen a great effort to get away from this inefficient method, yet now we are asked to saddle ourselves with a system which is as sure as anything to restore to respectability this fast disappearing practice. As part and parcel of this same difficulty, health insurance does not assume to provide and probably will in practice discourage the tendency to send patients to a hospital where they can be studied with the best results to themselves and the least expenditure of unnecessary time and exertion by the physician. For these reasons it appears to me certain to promote a method of practice unlikely to promote health or to shorten the loss of time from disease.

Another prime consideration is its effect upon the medical profession who give their lives to it. It has been sometimes argued that this and various other methods would tend to make medicine an unattractive calling. From the point of view of the medical practitioner this is a valid objection. From the point of the community, on the other hand, the medical profession can have no rights which the public is bound to respect to its own disadvantage. If it could be shown, which I think it cannot, that this or some other system would promote health, the medical profession would have no case at the bar of public opinion even though it were sacrificed to the method. But it appears to me quite clear that this method of practice will not only fail as a panacea for the health of the community but will debase the practice of medicine so that all parties will be worse off.

Obviously under some system comparable to the "panel system" in England, a premium is placed upon the number of visits or calls that a given practitioner can make. From this it follows that it is clearly to his financial interest to see the least serious cases and to visit those who live in his immediate vicinity. Obviously, to care for the seriously ill is likely to consume time wholly out of proportion to the fee received, and sick patients and those who live at a distance are likely to suffer. It might further be suggested that this system tends to promote the sort of snap diagnosis which flourished in the earlier days of the out-patient clinics of the metropoli-

tan hospitals where they were understaffed and overworked and from which we have been trying to escape ever since.

For these and various other reasons it seems to me clear that compulsory health insurance will inevitably work to the disadvantage of the community and to the very grave disadvantage of the medical profession; but clearly it will not do for us to assume a negative attitude. If we are unwise enough to sit complacently by, it is wholly probable that some system will be put in force which we believe entirely unsound. As evidence of this probability may be taken the situation in England, where the organized medical profession opposed the system suggested by Mr. Lloyd George and to a considerable extent refused to assist him in working out some satisfactory method. As a result he went ahead on his own responsibility and there resulted the "panel system," which now bids fair to be most useful as a warning to the unwary.

#### STATE MEDICINE A THREAT, NOT A PLAN

The phrase state medicine is commonly used to convey some ill defined arrangement by which the state shall become the responsible source of medical practice. It is probably often intended to convey the idea that all physicians should become salaried officers of the state. In this form it is probably rarely used as a constructive suggestion but is intended like the Democratic Party in the days following the Civil War to serve as a threat rather than as a plan. There is, I believe, no sound reason for believing that medicine could thrive in such an atmosphere. At best such a service would be comparable to that now existing in the medical establishments of armies and navies the world over, and in this form it is notorious that lack of inspiration and degeneration more or less inevitably follow.

But if we are inclined to object to it on the ground that it will injure the personnel of medicine there will not be lacking those who oppose it on other grounds. It is certainly to be opposed by those who advocated what they pleased to call "medical freedom" and who yearly appear before our legislatures in opposition to bills proposed in the hope of improving the condition of the public health. It will also be opposed, and not without reason, by those whose business it is to determine how such a method should be financed. If these officers of the state are to be paid sufficiently large salaries to command the services of really first class men, the bill must be little short of staggering, and, coupled with the steady tendency to saddle the state with many expenses which in the past have been thought unnecessary or of private concern, will probably not commend itself to the average legislature.

#### STATE RESPONSIBILITY FOR HEALTH

In this form, therefore, I think we need not consider it in the light of a present possibility. If, on the other hand, we understand this some-



what loose phrase to mean progressive assumption on the part of the state of responsibility for health questions, such a situation now exists. More and more the state has been assuming responsibility for certain phases of medicine, chiefly in the field of preventive medicine, and enormous improvements have been made in comparatively recent times. To progress along this line there can be no valid objection and it is not inconceivable that the time may come when we shall be willing to advise the state to enter more and more into the field of curative as well as of preventive medicine. If, construing the phrase still more widely, we understand by state medicine the assumption by communities of responsibility for the care of the sick, we then approach a phase of the question which is inviting and one in which there is much evidence that activity looking toward definite change is widespread.

We rightly believe that our knowledge of the complicated business of looking after the sick entitles us to be heard. I believe there is no reasonable doubt that we shall be heard if we have a constructive plan, and equally little doubt that if we should unwisely confine our efforts to obstruction that we shall receive, if possible, less consideration than we deserve. It is, therefore, with the hope of stimulating discussion and thought rather than with any overweening confidence that I have a wholly satisfactory plan to propose that I desire to invite your attention to a possible line of development which appears to me at least worth considering.

#### ESSENTIALS OF A SATISFACTORY METHOD

Whatever method we adopt must aim to insure to every member of the community satisfactory medical treatment without requiring him to accept charity or go into debt. It must allow a reasonable freedom of choice or, if choice is to be restricted, must guarantee a high grade of medical skill. It must reasonably distribute the cost so that it shall not be unnecessarily burdensome and, finally, it must not interfere with the proper development of the science and art of medicine. We might, perhaps, lay more stress upon this latter point and insist that any system, to be satisfactory, must show evidence of actually promoting the development of medicine.

In attempting to suggest a method of improving present conditions it is only proper to recognize that various experiments are being tried and with varying though considerable degrees of success.

#### INDUSTRIAL MEDICINE

This phrase is often loosely used to cover the medical establishments which have been set up by employers for the purpose of caring for their employees. For many years these establishments have been growing and have now been carried to a high degree of efficiency. There can be no manner of doubt that many of the great industrial corporations now provide for their employees an

amount of medical care which closely approaches the ideal. They have wisely provided well trained physicians properly paid, and have organized their work on a system or variety of systems which would go far to solve the problem if it were satisfactory to what one might call the insured. But it is commonly true that the employees for one reason or another dislike this method. It is alleged that they suspect the evidence of paternalism. It is alleged that they object to this limitation of their freedom of choice, and it is alleged that the corporations use the method to their own advantage.

Though these allegations may appear shadowy and unsubstantial, there is probably some basis for the widespread belief that the problem will not be solved in this way. To my mind the greatest objection to this method is that it is a solution carried out privately, but charged against the community in the heightened cost of production, and yet the community has no voice in its management. On the other hand, there is doubt that these establishments have served and are serving a very useful purpose. For the time being, at least, they give time for the orderly discussion and consideration of the problem and they provide an immense amount of what one might call experimental evidence on the methods of managing industrial accidents, diseases, and conditions arising within industry. Whatever method may be finally adopted, we shall owe a considerable debt to these pioneers in this method of caring for the sick upon a large scale.

The phrase "group medicine" has of late years come into vogue to cover what almost amounts to partnership between the specialties of medicine. These groups are a serious attempt to solve the problem which we are discussing and have undoubtedly promoted efficiency in the diagnosis and treatment of disease. The chief objection to regarding them as the best method of solving the problem is that they are only incidentally constructed for the benefit of the patient. This benefit consists more largely in increased efficiency than in increased expense. It is certainly true that in many of these medical groups the financial benefit of the group rather than of the patient has been the commanding consideration.

#### THE COMMUNITY HEALTH CENTER

By whatever method we may finally decide to care for the health of the community the fundamental proposition upon which it is based must be that the public health is a public concern. From this it follows that the soundest method will be that which is based upon community consciousness. For this reason I look to some development in the now rather vague field covered by the phrase "community center" for the solution of the problem.

A great variety of possible developments may be here included. In its simplest form a community may provide itself with a director of health whose business it shall be to coordinate

existing agencies, encourage cooperation, discourage duplication, and promote efficiency. In this form it is already in operation in various parts of the country. But it may be doubted whether without more means at his disposal such a director will obtain results at all commensurate with the effort expended. A slight advancement from this plan is to provide such a director with a staff of physicians whose business it shall be to keep in touch with the medical activities of the community and go further than he himself could go along the line of influencing medical practice by suggestion and publicity. But, again, this arrangement falls short of providing sufficient power and does not enable the director and his staff to exert the authority of public opinion which must at the last analysis be the ultimate authority.

One of the clearest signs of the times is the tendency of medical practice to group itself about hospitals, and there can be no doubt that in the future of medicine the hospital will play an increasingly important part. For this reason it has appeared to me wisest in any scheme looking to the provision of care for all members of the community to start with the hospital as a basis and create what might be called the hospital center, whose function it should be not only to provide care within its wards but to radiate medicine in the community at large. The possibility appears to me attractive, but to be successful it must have a far broader conception than the municipal hospitals with which we are all familiar. It must take its authority from an educated public opinion which knows, broadly speaking, what it wants and is prepared to employ experts to obtain it. Undoubtedly such a method can be worked out most easily in comparatively small communities where there is a small city with a large area of surrounding country ultimately dependent upon the city for medical service. Under such conditions one might well conceive that some such machinery as the following would work with considerable satisfaction.

Such a community might construct and own a hospital with sufficient capacity to take care of something more than the average number of sick, not only in the city but in the surrounding district which it must serve. It is perhaps not necessary that this should be calculated to provide accommodations for those who ordinarily avail themselves of private physicians or private hospitals; but, on the other hand, if such a hospital is to be a perfect health center, it should be constructed so as to provide everything which that community wants for the care of its bodily ills. Obviously in communities of large population, it may be wise to construct several such hospitals as there is undoubtedly a working unit in hospital construction beyond which efficiency of operation is sacrificed. But for a moment let us assume that a hospital of no gigantic dimensions

will fill the bill, and let us further assume that it is planned to provide accommodations for all sorts and conditions of men.

#### GROUP CONTROL OF HOSPITALS

In charge of this hospital must be a group, perhaps called a board, who properly represent the wishes of the community, and I believe that this board should serve without pay, so that the only motive for service on the board will be an abiding desire to serve the community. This board must provide itself with a general manager who must, I believe, be a physician, in order that he may be reasonably familiar with the problems with which the board must deal. Such general manager or director must have large powers in executing the policy of the board.

The board must next provide itself with a staff capable of covering the entire field of medicine and medical research, and this staff must be at the service of the community. The problems involved in the selection of such a staff are obviously considerable, particularly if such a hospital is to be started in a community already supplied with a sufficient number though perhaps not sufficient variety of capable physicians. Clearly this staff must be of more than average skill and equally clearly their skill and qualifications must be beyond reasonable doubt and, therefore, must be determined by some authority having no interest beyond the determination of the facts. In order to avoid difficulties the board would probably be well advised to avail itself of the advice of directors of great medical centers who are constantly engaged in the training of experts in every field of medicine. In order to obtain and retain the services of such a staff, proper salaries must be paid, and it may well appear that the provision of such a sum will bear heavily upon the community. This difficulty may, I think, in part be solved by allowing this staff to practise in the ordinary sense of the word and to collect fees from such patients as are able to pay. As the staff, when under this arrangement, would consist of well trained, capable specialists, it would certainly follow that their services would be in considerable demand in the community and that their income from this source would go far to make up the guaranteed salaries which they would be assured of by the board.

From this it would result that the community through the board would pay only the balances and might conceivably not have to pay at all.

#### THE PATIENTS WHO ARE ELIGIBLE

Some difficulty will undoubtedly arise in determining what patients are entitled to free care and treatment, what patients should be partly free, and what patients can defray their own financial obligations. This difficulty, however, is at least much diminished if we assume that this is in fact a community hospital. It is not difficult if proper machinery be provided to ascertain what are the living conditions of any individual



and what is his income relative to his obligations. If we cannot assume that the community really wants to promote its own health and is willing to take any reasonable steps in order to do so, then of course this method will fail; but so will any other method, and on this line of argument the whole proposition becomes insoluble.

#### OPEN VS. CLOSED HOSPITALS

The medical profession will of course be vitally interested in the question of whether this community hospital is to be what is called "open" or "closed." It is, I think, generally admitted that if one has regard only for a high grade of efficient medical practice the closed hospital is likely to give the best results. On the other hand, it is practically a contradiction of terms to refer to a closed hospital as a community hospital. A closed hospital at once denies the freedom of choice which is generally admitted as essential if it is to command the confidence and support of the community. Physicians who are barred, though in good standing, will obviously not send their patients to a closed hospital unless they be compelled to by fear of disaster either to the patient or to themselves. It cannot, I think, be successfully contended that a closed hospital can satisfactorily serve the whole community and, therefore, some sacrifice of efficiency is necessary in the interest of the community operation. The answer to this dilemma perhaps lies in a combination of the two methods. The staff provided by the community must obviously look after those patients who are unable to pay and also such other patients as desire their services. Beyond this, the hospital might well be opened to all reputable physicians with the proviso that the board shall have the power to exclude any physician whose work does not match up to a reasonable standard of excellence.

But such a hospital will not have performed its functions if it stops here. It is growing more and more difficult to provide satisfactory medical care for the small villages and scattered populations of the outlying districts. I am firmly of the opinion that provision for such care is entirely within the function of the community hospital and that unless it serves this purpose it will fail to radiate medicine and, consequently, fail of its purpose. The work now done by isolated physicians attempting to cover a large area of territory could well be taken over by the hospital, whose business it would be to establish throughout the surrounding country small centers provided with a young physician and one or more nurses. These people would be constantly in touch with the hospital staff, thus obtaining advice, consultation, and comfort. While they should be integral parts of the hospital staff, they should be movable rather than fixed and this service should be regarded as a part of the training of the younger men who intend to fit themselves for the practice of medicine in its broadest sense. This line of development seems

to me particularly attractive. It would enable such a community hospital to offer a variety of opportunities, particularly to the younger medical men whose capacities are unknown and who might in this way, better than in any other, have an opportunity to survey the broad field of medical practice. The same proposition would hold true as regards the nurses associated with smaller centers. They would see medicine in its relation to people as is not now possible in the hospital training schools. As a result they would not only be better equipped for whatever branch of nursing practice they ultimately espouse, but they would have larger opportunities of surveying the field and thereby learning their own capacity.

I submit this rough sketch of possible medical development for your consideration. It is obviously incomplete, open to objection, and its pathway strewn with thorns. I hope that you will find in it the merit of a conscientious attempt at a constructive program based upon the assumption that the community really desires to have its health properly supervised and its illness properly treated. Any scheme is subject to this consideration and, though it may fairly be doubted whether the community consciousness throughout the country is sufficiently developed and crystalized to know its own wants, it is possible that in various places such experiments may be tried and may prove helpful to a final solution.

### Council Held Busy Quarterly Session in Columbus, October 3

#### MINUTES

Council of the Ohio State Medical Association met in Columbus, October 3, 1920, with the following members present: President Lukens, President-Elect Teachnor, Ex-President Baldwin, Treasurer Platter; Councilors Ewing, Hendershott, Updegraff, March, McClellan, Rardin and Goodman; J. H. J. Upham, Chairman of the Committee on Public Policy and Legislation, and Executive Secretary Martin. Attention was called to the fact that this was the first Council meeting missed by Dr. Carothers, of Cincinnati, during ten years of service as a member of this body, and sympathy was formally expressed for him in his bereavement in the loss of his son.

Resolutions of regret at the death of Dr. J. C. Reeve, Dayton, first vice president-emeritus of the Association, were passed.

Minutes of meeting of Sunday, June 27, 1920, were approved as published in the August issue of *The Journal*.

Dr. Teachnor, chairman of the committee appointed at the last meeting of Council for consideration of that part of the President's Annual Address relative to Medical Colleges, stated that a meeting had been called, but inasmuch as all of the members could not be present, no report

was prepared for presentation at this time. On motion, seconded, the committee was continued.

Dr. Goodman presented a communication from Dr. F. H. McMechan, secretary of the National Anesthesia Research Society, offering to make a survey of the anesthesia situation in Ohio with the sanction and cooperation of the Ohio State Medical Association, based on recommendations on this subject made by the special committee on the President's address and approved by the House of Delegates at the last annual meeting.

After discussion by Drs. Baldwin, Goodman and others, Dr. Rardin moved that the president appoint a committee of three to cooperate with the National Anesthesia Research Society in securing information and in checking results, as outlined by Dr. McMechan. Seconded by Dr. Teachnor. Carried.

Dr. Goodman read a communication from Dr. McMechan, secretary of the Interstate Association of Anesthetists, relative to nurse anesthetists and numerous matters of policy. Dr. Rardin moved that the communication be referred to the Committee appointed to cooperate in the survey of the anesthesia situation, a preliminary report to be presented at the next meeting of Council, and full report to be made to the House of Delegates at the next meeting of the Association, May, 1921. Seconded by Dr. Hendershott. Carried.

The executive secretary outlined in detail proposed and prospective legislation, which was followed by a general discussion.

The executive secretary outlined plans for a Speaker's Bureau, in assisting county secretaries in the formation programs. After discussion, Dr. Hendershott moved that the suggestions be adopted by the Council and that the executive secretary be instructed to cooperate with the officers of the county societies, and furnish the Council with lists of available speakers, and any other details for the welfare of their districts. Seconded by Dr. Ewing. Carried.

Dr. Rardin moved that a committee of three be appointed by the president to investigate and communicate with the various councilors, with a view of redistricting, or making changes in the districts where practical. Seconded by Dr. Goodman. Carried. President Lukens appointed Drs. Rardin, Ewing and Hendershott to serve on committee authorized by Dr. Rardin's motion.

Dr. Upham reported that he had received announcement of a special meeting of the House of Delegates of the American Medical Association, November 11 and 12, for the consideration of raising Fellowship dues from \$5.00 to \$7.50. Dr. March moved that delegates from Ohio to the A. M. A. be instructed to attend the meeting and to use their best judgment in acting on the question. Seconded by Dr. Rardin. Carried.

After thorough discussion, the Section on Obstetrics and Pediatrics and the Surgical Section were selected. Dr. March moved that the

chairman of the Section on Obstetrics be requested to select Dr. Whittridge Williams, of Johns Hopkins University, as one of the orators. Seconded and carried. Dr. Rardin moved that the chairman of the Surgical Section be asked to secure the orator for the surgical oration. Seconded by Dr. Hendershott. Carried.

A report on the activities and progress of the various committees on Physical Education in the Schools; Crippled Children situation, and the Medical Education Committee was submitted by the executive secretary.

Dr. Rardin moved that Council authorize the Committee on Auditing and Appropriations to transfer \$300.00 from the Unassigned Fund to be used by the Committee on Medical Education. Seconded by Dr. Platter. Carried.

The executive secretary presented a communication from Dr. Craig, secretary of the American Medical Association, relative to a conference of secretaries of State Associations to be held in Chicago, November 11 and 12. Dr. Goodman moved that Council authorize the executive secretary to attend the meeting in Chicago. Seconded by Dr. Hendershott. Carried.

A membership summary submitted by the executive secretary showed that on September 30, 1920, the paid up membership of the Association numbered 4,737. This is an increase of 121 over the enrollment on the same date last year.

A report on Medical Defense showed that since January 1, 15 suits have been referred to the Association. Of this number, our general counsel has actively undertaken defense in six instances (in which trials are pending); five cases are being defended by private indemnity companies, with the assurance that our counsel will render advice and such other assistance as is compatible under Rule 12; two cases were refused because of delinquency in membership, and in two other suits applications have not been filled out by the defendant physicians. In addition to these, four suits from last year are awaiting trial. On January 1, eleven threatened actions were under observation and since that date six additional threats have been referred, but in none of these instances have suits been filed. Numerous inquiries concerning the operation of the defense plan have been received, indicating an interest in and appreciation for this important Association activity.

On motion, seconded, Council adjourned to meet Sunday, January 2, at 1:30 P. M. at the Deshler Hotel.

SYLVESTER J. GOODMAN, Secretary of Council.

*Troy*—Dr. A. H. Haworth has moved to this city from West Milton.

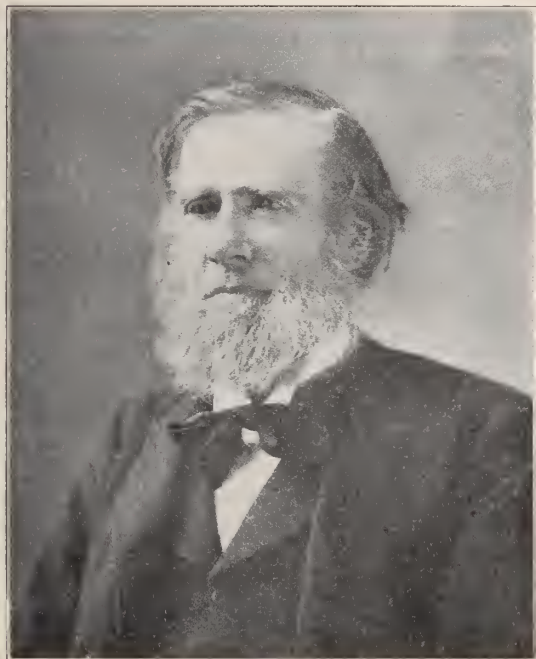
*Galien*—Dr. E. D. Helfrich, former member of the Ohio Legislature, has gone to New York, where he will spend the winter in post-graduate study at the Manhattan Eye, Ear, Nose and Throat Hospital.



## DEATHS IN OHIO

*Dr. Henry M. Brown, M. D.*, Medical College of Ohio, Cincinnati, 1879; aged 61; died at his home in Hillsboro, September 29, after a long illness. Dr. Brown practiced in Hillsboro and Cincinnati but retired 20 years ago because of ill health and had since engaged in farming interests. He was a member of the last State Constitutional Convention and in 1912 was a candidate for nomination to Congress. His widow and one daughter survive.

*Alvin Orpheus Ervin, M. D.*, Starling Medical College, 1900; aged 48; member of the Ohio State Medical Association; died August 21, in Washington C. H. Hospital. Dr. Ervin's home was in Jeffersonville, to which city he had recently moved from New Holland. He was county health commissioner at the time of his death. Surviving are his widow and two children.



Dr. Isaac Kay

*Isaac Kay, M. D.*, Starling Medical College, Columbus, 1849; aged 92; life member of the Ohio State Medical Association; died at his home in Springfield, September 20, from infirmities of age which had confined him to his bed for five months. Dr. Kay began practice in North Lewisburg, Clark County, immediately after his graduation and in 1853 removed to Springfield where he practiced for more than 60 years.

An inveterate student, Dr. Kay contributed many articles to current periodicals on medical

subjects and had been for years regarded as one of the most potent individual factors in advancing the standards of the medical profession. His activities in this field, together with his deep interest in medical research, called forth recognition from many institutions of learning and he was accorded honorary degrees by colleges and universities. An organizer of the Clark County Medical Society, Dr. Kay served at various times as secretary and president of that body, and also held office in the State Association.

In addition to his professional work, Dr. Kay found time to answer the call to public service. For nine years he was a member of the Springfield Board of Education, served a term as county coroner, and for many years was physician at the Clark County Infirmary. He leaves two sons, Charles S. Kay, member of the Ohio legislature, and Dr. Clarence H. Kay, with whom the deceased was associated in practice.

*Addison K. Kirkpatrick, M. D.*, Miami Medical College, Cincinnati, 1897; aged 49; member of the Ohio State Medical Association; died at his home in Eckmansville, Adams County, September 11. Previous to his residence in Eckmansville Dr. Kirkpatrick was located at North Liberty and Decatur. His wife and one daughter survive.

*Francis Nathaniel Mattoon, M. D.*, Starling Medical College, Columbus, 1873; aged 77; died at his home in Columbus, September 13, from complications resulting from paralysis with which he was stricken in May. Dr. Mattoon practiced medicine in Plain City for 30 years. He was a veteran of the Civil War. Surviving are his wife and one son.

*John William McKemy, M. D.*, Jefferson Medical College of Philadelphia, 1903, aged 44; member of the Ohio State Medical Association and Fellow of the American Medical Association; died, September 13, from injuries received when the automobile in which he was riding plunged over an embankment four miles from Dayton. For eight years Dr. McKemy served as police surgeon and later filled the office of county coroner for two years. During the recent war he served overseas as a captain in the Medical Corps. His widow survives.

*Joseph F. Purviance, M. D.*, Philadelphia University of Medicine and Surgery, 1863; aged 84; died at his home in Jewett, September 4. Dr. Purviance practiced in Steubenville for nearly 50 years prior to his retirement and removal to Jewett in 1912. He leaves his wife, one son and four daughters.

*S. J. Shetler, M. D.*, Cleveland College of Physicians and Surgeons, 1883; aged 66; former member of the Ohio State Medical Association; died at his home in Cleveland, September 5. Dr. Shetler was a practicing physician in Navarre

for many years before locating in Cleveland. He is survived by his wife and one son.

*Joseph H. Wilson, M. D.*, Cleveland University of Medicine and Surgery, 1871; aged 76; member of the Ohio State Medical Association; died at his home in Bellefontaine, September 16, from paralysis. Dr. Wilson was the dean of the local medical profession, having entered practice in Bellefontaine one year after his graduation, and was honored by election to the presidency of the Logan County Medical Society. During the Civil War Dr. Wilson served with the 135th Ohio Volunteer Infantry. Surviving are his wife and two children.

*Clarence H. Wright, M. D.*, Eclectic Medical College, Cincinnati, 1876; aged 71; died at the Dayton Soldiers' Home, September 23, from Bright's Disease. Dr. Wright was a resident of Christiansburg, where he practiced medicine for a number of years, before entering the Dayton home. He leaves one sister and one brother.

### Commendable Work in Trachoma Prevention

Trachoma work was not taken up seriously by the State Department of Health until September, 1919. Prior to that time superficial surveys had been made in five counties, and these surveys had shown that the disease was most prevalent in those counties bordering on the Ohio River, and contiguous counties receiving large numbers of immigrants from Kentucky. A Bureau of Trachoma Clinics was established in the Division of Communicable Diseases in September, 1919, and surveys of several counties were started at once.

Scioto and Ross counties were first surveyed, Scioto yielding 179 cases and Ross 64. The services of Dr. John McMullen of the United States Public Health Service, were then secured and clinics were held in both counties. In Scioto county 179 cases were brought to the clinics and operated successfully. The experience in Ross county was similar. These successes encouraged the State Department of Health to extend the work more rapidly than had been expected. Surveys and clinics were held in Cincinnati, Columbus, Hamilton, Middletown, Gallipolis and Ironton and in a number of smaller places. These surveys and clinics included the counties in which these cities are located.

One of the most interesting surveys occurred in McGuffey, in the so called "onion" district of Hardin county. Thousands of Kentuckians came to work in these onion fields every summer, often bringing the entire family. Nearly a quarter of all those examined in that district had trachoma. The disease has also spread to the natives of the county to a limited extent. A trachoma survey made in East Youngstown several years ago showed that a large number of the foreign-born employed in the steel mills suffered from the disease. Europe and Kentucky are probably the

most important sources of trachoma in Ohio. Immigrants from Europe are now excluded for trachoma so that the danger is not so great now as formerly, but there are, of course, no restrictions on immigration from Kentucky.

One of the most successful trachoma clinics held in Ohio took place at Ironton, September 21 and 22. A survey of city and rural school children revealed 103 cases. One hundred and ninety persons presented themselves at the clinic for examination, and 96 were operated—95 for trachoma and one for entropion. There were 75 visitors present including 50 physicians. A second clinic was held at Ironton on October 19, but the results have not been tabulated at this writing.

The following table gives a summary of what has been accomplished in trachoma prevention and treatment from September 1, 1919, to October 15, 1920:

Number of persons examined.....	174,614
Number of cases found.....	935
Percentage .....	.53
Number of suspicious cases.....	670
Number of cases operated.....	643
Percentage of cases operated.....	68%

Cases are marked suspicious when any doubt as to the diagnosis exists in the mind of the examiner. These cases are often given some simple form of medical treatment, under which they clear up rapidly if not trachoma. Positive and suspicious cases are excluded from school until proper treatment is given and the disease is no longer communicable.

During the surveys an attempt is made to gather up all suspicious cases, and in a few instances this has led to misunderstanding and criticism by oculists. No such criticism has outlived the clinics however, where all cases are re-examined by Surgeon McMullen. The cooperation received from physicians, both general practitioners and specialists, has been one of the most pleasant features of the work.

If the work of trachoma prevention can be maintained at its present rate of progress, no other state in the Union will surpass or even equal Ohio's record.

### Small Advertisements

*For Sale*—Yale Static Machine with Electric Motor slightly used. Antique oak solid frame. French plate. X-ray apparatus, \$200.00 to quick buyer. Address P. O. Box 895, Youngstown, Ohio.

*For Sale*—Good location for price of property only. No opposition; good income from start. Will sell or rent house, office and barn, equipped with electric lights, city water. For particulars, address C., care of *The Journal*.

*Location*—Young physician, recent graduate with some hospital and general experience would like to become associated with an older physician who desires assistant. Location in or around Cincinnati preferred. Personal and professional reference furnished. Interview solicited. Address D, care *The Journal*.



# FOR PHYSICIANS ONLY

If the physical examination of a patient  
is complete

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# MEDICAL COMMENT ❧ ❧ ABSTRACTS AND CURRENT TOPICS OF INTEREST

**T**HE PUBLICATION COMMITTEE IS MORE THAN ANXIOUS TO MEET THE NEEDS OF THE JOURNAL'S READERS. IN CONSEQUENCE THE MEDICAL EDITOR IS INITIATING A NEW DEPARTMENT TO BE DEVOTED TO MEDICAL COMMENT, ABSTRACTS, AND CURRENT TOPICS OF INTEREST TO THE GENERAL PRACTITIONER. THE EDITORIAL POLICY OF THIS NEW DEPARTMENT WILL BE ONE OF SERVICE AND SUGGESTIONS AND CONTRIBUTIONS WILL BE GRATEFULLY RECEIVED.—MCM.

## Lipoid Dressings in the Treatment of Wounds and the Control of Infections

**A**CAREFUL study of the recorded experiences of military surgeons during the war and of the expressions of their opinions as to the efficiency of 'standardized' systems of wound treatment, leads one who approaches the subject in an analytical spirit to conclude that the influence of the personal element, of the surgeon and associates modifies in very great measure the details of technique and the recorded results.

In what manner is routine practice so modified as to bring about such widely divergent morbidity and mortality statistics with the same system, with the same types of wounds and apparently the same class of patients?

The answer, we believe, says *Autacoid and Suture*, September, 1919, editorially, will be found to be not only in the skill of the surgeons and the thoroughness of the special technique but also in the careful attention to all the refinements of systematic treatment and after treatment and the utilization of all physical, chemical and immunologic aids. It is this that readily distinguishes the man of broader vision or experience, the mature master and the younger genius in medicine as well as in surgery.

The importance of careful attention to the minutiae of collateral treatment in the remarkably large proportion of cases in which association and environment during previous civil life has seriously undermined general constitution is we believe not sufficiently appreciated.

Mechnikoff, Lane, Crile, Cushing, Sajous, Taylor, Barker, Bainbridge and many others have called attention to the fact that the artificial environment conditions of man in present day civilization are gradually and very generally bringing about abnormalities in intestinal function and in metabolism and to their serious sequelae. Each of these enthusiastic pioneers, in the face often of open criticism and censure, has attacked the problems of prevention, palliation and cure, in his own unique and inimitable way.

In a recent contribution to the literature on the treatment of wounds and infections, "*Studies in Electro-Pathology*," A. White Robertson, Lt. Col. R. A. M. C., points out that metabolism is a complex cellular electro-colloidal process with protective cellular lipoids acting in the manifold

capacity of nutrition conveyors, energy laboratories and transformers, and toxin retarding barriers. He believes that hyper-susceptibility to disease and bacterial infection are coincident with the merotomy of the cell and dissipation of its turgidity and electro-potential as a result of the exhaustion of this lipoid dielectric from overstrain or fatigue, or from an habitual "nerve and thyroid starvation diet" of "vitamine" deficient food, due to past unnatural environment.

Though an advocate of prophylactic bacterial immunization he points out that it is possible to control localized progressing infection by augmenting, by all possible measures, the deficient lipoids (cholesterine, phospho-lipines and galactolipines), disregarding, if need be, a direct attack on the bacterial flora.

It would seem that tissue cells of correlated function in good tonic and turgid condition possess the hereditary habit of resonant response and group reaction to stimuli of a range and quality for which they have through the ages acquired or retained sensitive "receptors" which are safeguarded (within the range of their natural environment) by protective lipoid screens against an excess of light heat and chemical colloid-hydrolysing and dissociating agents.

Robertson, finds the application and exhibition of lipoids and special lipoid substitutes most effective, when used early, in the surgical treatment of wounds, in burns, neuritis, cellulitis, erysipelas, scurvy, sprue, beri-beri, mucoscolitis, auto-intoxication and chronic intestinal stasis ("as a lubricant, cholesterin substitute and toxin adsorbent"), pneumonia and tuberculosis, and its use has also been suggested in the early treatment of gastric or duodenal ulcer (or where surgical interference for this condition is refused or contra-indicated) in leucorrhea, vaginitis and cervicitis.

He recommends the application of a Lipoid Dressing, as an *ajuvant* in the treatment of infected wounds and in localized inflammatory conditions, and exhibition of all deficient salts, the use of mono or polly-glandular hormogenic agents where indicated, the natural environment of fresh air and sunlight, and a return to "quick" vitamine—full foods.

We have taken the liberty of excerpting from Robertson's book very freely because seemingly exceedingly radical and unorthodox and at variance with contemporaneous thought, it will, we





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believe, on intensive examination and study be found in practice to be in accord with old and with new theory and with both scientific and empirical medical and surgical procedure. We call particular attention to it also because it advocates an alternative system of procedure that may supplement or even supplant present day routine methods when environmental and clinical conditions suggest its adoption—should the superiority of the system be confirmed on more extended trial.

It suggests a scientific rationale for immuno therapy, for hormogenic therapy, for hyperemic and specific drug therapy, for the efficiency of emollients in the dermatoses and in localized inflammatory conditions, and indicates the reason for some of the failures in specific treatment that have baffled medical science in the past. It explains the apparently contradictory conclusions of surgeons who are returning from the base hospitals in Europe as to the efficiency of modern methods of wound treatment.

*It suggests that the wide diversity of opinion as to the efficiency of modern standard practices in the treatment of war wounds is possibly due in great measure to the fact that skillful surgery and thorough debridement with either physiological, aseptic or antiseptic treatment of the local infection may be in the end vitiated unless steps are simultaneously taken to assure that in the immediate after treatment the tissues of the wound are supplied with their natural protective resources and with an optimum amount and quality of essential stimulating nutritional elements in the lymph stream.*

The phenomena of tissue response are evidently "electro-colloidal" but whether the cause be 'vital,' 'electrical,' chemical, kinetic, hereditary, helio-chemical, or what not, the ideas and methods presented are interesting principally in that they enable us to visualize a little more clearly the complex phenomena of health and disease, to think and act more in concert, to grasp the fundamental underlying modern surgical treatment, to assist nature by utilizing and augmenting her resources (as we do in agriculture), and to appreciate and utilize perhaps more intelligently both in prevention, palliation and cure some of the latest products of the laboratory that are at our command.

The striking difference in response obtained when food products generally and animal derivatives in particular are employed in the "Quick" condition or on the contrary when beginning proteolytic decomposition by 'enzyme' action and physical change has occurred, and the vital importance to the processes of general metabolism and local repair played by the lipoids are, we are convinced, sure to receive a far greater measure of study and application by research worker, physician and surgeon as a result of the appearance of this most interesting, unique and instructive book.

(To be continued) 3

## Tribute to Dr. Reeve in Resolutions of Montgomery Society

On September 15, 1920, there ended the long active, strenuous, devoted and useful life of Dr. John Charles Reeve.

He was an Englishman by birth and inheritance, but an American by early adoption, education and long service.

By his passing away the Montgomery County Medical Society and the Second Councilor District Medical Society lost their most honored and most eminent member, the Ohio State Medical Association an honored ex-president and the first incumbent of the president-emeritus office, and the city of Dayton has lost a respected and useful citizen.

Dr. Reeve's early struggles, educational and medical, are pretty generally known, having been graphically portrayed by himself in some recent magazine articles. His pre-eminent characteristic was Strength: strength of body to endure and overcome, strength of intellect to know, strength of will to decide, and strength of purpose to act. Circumstances could delay it but in the very nature of such a man eventual success was assured him, and obstacles served but to increase it, for he was of the stuff of which pioneers are made.

Of his success as a general practitioner, family physician, surgeon, obstetrician, etc., hundreds of his fellow citizens knew by actual contact. Professionally he was a man whose ideals of honor and integrity were of the highest. No professional brother ever failed to get from him all the assistance it was in his power to give, and, when occasion demanded it, his professional and personal services were never denied to any patient.

To the medical profession at large he was known mostly by his writings which were always in the choicest English and singularly forceful and elegant. He was especially felicitous in his book reviews which were always sought because of his fearless, fair and just handling.

Dr. Reeve was early interested in the subject of anesthesia and his writings in the American Journal of Medical Science back in the seventies were read by the profession as master-pieces in their day. He also was the man who first used and introduced the clinical thermometer to the profession in America. In recent years he has prepared and read several papers on the history of subjects very interesting to both the profession and the laity.

Of Dr. Reeve's life it may be truly said that he approached closely to fulfilling that dictum of Carlyle, who said: "The true law of culture is let each become all that he was created capable of being."

To the members of the Society Dr. Reeve's life work should always be an inspiration and to his family we extend our sincere sympathy.

MONTGOMERY COUNTY MEDICAL SOCIETY.  
Sept. 17, 1920.



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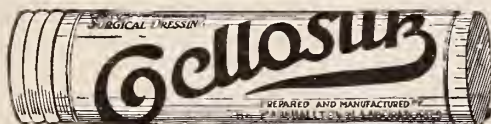
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## Physical Education of School Children Favored

As a result of the action of the House of Delegates of the State Association at the 1920 state meeting in authorizing a special committee to cooperate with the Ohio State Teachers' Association in the promotion of better health conditions in the schools, it is practically certain that a bill providing for physical education in the schools will be one of the constructive measures which will have the Association's backing in the next session of the legislature.

The Pearson bill (House Bill No. 381), introduced last session, provided for physical education in the schools and health inspection in county school districts, and authorized boards of education to pay expenses of remedial treatment of school children. This bill, however, was retained in committee and never came to vote because some of its provisions conflicted with those of the Hughes-Griswold measure and it was felt that the latter was the more important of the two and all effort should be bent on its passage.

The bill to be introduced next session will probably be formulated with a view of taking advantage of the federal assistance for physical education offered states by the Fess-Capper and Smith-Townsend bills, now pending in Congress. Organization of the various states for this purpose is encouraged by the federal government and is being assisted by the National Physical Education Service.

A law enacted in Kentucky recently provides physical education and training for all pupils in the common, graded, state normal and other public schools of the state, supported wholly or in part by the state and prescribing the methods of carrying the same into effect. It states that in all common schools of the state not less than thirty minutes of each school day shall be devoted to instruction in health and safety, to physical exercises and the recess play under proper supervision. An attractive manual setting out the details of the course of study has been prepared by the Superintendent of Public Instruction in cooperation with the State Board of Health and the Department of Public Education and has been placed in the hands of all teachers.

Provision is also made in the Kentucky law for instruction in physical education subjects in state normal and other institutions concerned with the preparation of teachers.

While no state-wide program in this line has heretofore been undertaken in Ohio, the work is not entirely new. The Bureau of Child Hygiene of the State Department of Health recently formulated a plan of physical education of children from the first grade through the high school which has been adopted in a number of schools.

Figures compiled by the local draft boards during the war revealed a startling amount of disability among the younger generation which might have been avoided or corrected through a

knowledge of the principles of health protection. No better medium for the diffusion of this knowledge could be afforded than the school, which reaches all classes of our cosmopolitan population. With Ohio already in the forefront in health conservation the coming session of the legislature seems an opportune time for the state to further spread the gospel of health through a physical education program in its schools.

## Post-Graduate School for Health Commissioners

Through a cooperative arrangement effected by the State Department of Health and Ohio State University Medical College, health commissioners in Ohio counties and cities are again offered an opportunity to keep pace with modern progress in public health work by attending winter classes at the University.

A course of two lectures a week which started on October 5 and will extend through January is free to health commissioners who desire to attend. Classes meet Tuesdays and Thursdays. On Wednesday the commissioners are invited to attend the weekly staff meetings of the State Department of Health and to present local problems for discussion.

Preventive medicine, public health problems and personal hygiene are covered in the program of the course. Topics announced include: "The Milk Problem," "Review of Food and Milk Problems," "The Water Supply Question," "The Ventilation Question," "Sewage and Refuse Disposal," "Theories of Disease Prevention," "Specific Tests for the Presence of Diseases," "The Housing Question and the Household Spread of Disease," "Schools and Assembly Places," "Child Hygiene," "Middle Age Health," "Tuberculosis," "Occupational and Mental Hygiene," "Rural Hygiene," "Vital Statistics," "Health Education," "Health Administration."

These lectures which constitute regularly scheduled work of medical and other students of the university, offer to health commissioners a chance to keep up with the progress in public health work, to meet and exchange views with others in the same line of work, to get post-graduate work without the payment of fees, to see from the inside how a large department of health functions and to see how the other fellow presents the subject of public health to the public.

During September 115 claims involving payment for medical expenses in excess of \$200.00 were presented to the Industrial Commission. The amount ordered paid in these claims totalled \$12,005.08, or an average of approximately \$104.39 for each claim. The largest amount paid in any one claim during the month for such expenses was \$797.95.



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## Revised System of Medical Supervision in Cleveland Schools

Substantial changes in the health administration of the Cleveland public school system, designed to bring physicians and nurses into closer contact with the 113,000 children enrolled, have been put into effect by Dr. L. W. Childs, chief medical inspector of the schools. Under the new plan, medical supervision is much stricter and includes the examination of teachers and other school employes as well as pupils.

Formerly health examinations were from the collar up; hereafter they will take in the whole body. Instead of attempting to give hasty examination to all pupils, inspection will be arranged in four groups: The first group consists of children entering school. They are to be given a complete examination. This includes children coming from other cities and enrolling in Cleveland schools for the first time.

Those who are leaving school comprise the second group. The third group is the children of the third grade. It is at this period that the results of children's diseases have the greatest effect upon the child's physical and mental health.

Teachers and other school employes comprise the fourth group.

While all public school children are affected by the new system, 21,004 in various stages of poor health or incapacitation will be directly benefited. These are divided as follows:

Eighteen thousand seven hundred and fifty, or 15 per cent. of the total enrollment, who are generally rated as simple malnutrition cases, stunted in growth through faulty health habits.

Two hundred and five crippled children, 106 of whom are in a special school for crippled children and the remainder of whom are to be reached under the new system.

Five hundred and seventy children in 19 open-air classrooms, suffering from advanced cases of malnutrition, and where efforts are made in the more severe cases to prevent development of tuberculosis.

Ninety-six in eight sight-saving classes. These classes have three objects: (1) to conserve the sight and energy of pupils with defective vision; (2) to teach each individual pupil assigned to sight-saving classes how to conserve his vision, and (3) to place pupils passing through these classes in occupations where they will be least handicapped by reason of their visual defects.

Forty-eight in four schools for totally blind, where raised letters are used in educational development.

One hundred suffering from trachoma.

One thousand and thirty-five whose mental development has not kept pace with their age and who are assigned work for which they are best equipped in development of their mental faculties.

One of the most important changes in school health methods is in the daily examination of pupils to determine malnutrition. For this an entirely new health record card for examinations

has been furnished all teachers, and a number of nutrition classes have been established in connection with the Cleveland Nutrition Clinic.

Classes in corrective gymnastics, previously limited to pupils at the school for cripples will be extended to all students whose medical inspection shows defects of spine, shoulders or hips that can be remedied by special gymnasium work.

The personnel of the health staff includes 33 physicians, 31 nurses and six junior helpers for 130 buildings. Teachers in the schools are rendering valuable cooperation in the work.

## College of Medicine, University of Cincinnati, Observes Centennial

Extensive plans are being made for the celebration of the centennial anniversary of the College of Medicine of the University of Cincinnati, to be held on November 6. Dr. E. O. Smith, general chairman of the committees in charge of arrangements, has announced the following program:

- 10 A. M. Assembly in Academic Costume at the Cincinnati General Hospital.  
Marshals: Dr. Carey P. McCord and Dr. A. C. Bachmeyer.
- 10:15 Welcome by Judge Smith, President of the Board of Directors.  
Remarks by Acting Dean, J. C. Oliver, M. D.  
Addresses by Professor William T. Sedgwick, LL. D., and Dr. Joseph Ransohoff, on "Drake and Holmes."
- 12:30 Conferring of Honorary Degrees, President Hicks.
- 1:30 Luncheon.  
After luncheon guests are invited to visit various places of interest in the city.
- 7 P. M. Dinner at the Sinton Hotel.  
Toastmaster: President Hicks.

The principal speakers of the occasion will be Sir Auckland Geddes, British Ambassador to the United States, and Hon. John Barton Payne, Secretary of the Interior. Others on the program are Hon. John Galvin, mayor of Cincinnati; Mr. James R. Angell, president of Carnegie Corporation; Dr. Louis Schwab, representing the Alumni Association; Dr. Rudolph Matas, of Tulane University, and Dr. Charles R. Stockard of Cornell University.

The participation of Sir Auckland Geddes in the centennial celebration is particularly noteworthy. Sir Auckland is not only a statesman but a medical man as well. A native of Edinburgh he was graduated from the University of that city. While still a student of medicine he entered the English Army and served in the South African War. He later became professor of anatomy at the Edinburgh University, after which he held a similar position at the Royal College of Dublin and at McGill University, Montreal, Canada.

At the outbreak of the World War he joined the British forces, seeing active service at the front in France until his appointment as Minister of Recruiting. In 1918 he was made president of the Local Government Boards after which he became Minister of Reconstruction. He assumed his duties as British ambassador at Washington in March of the present year.

The dinner announced in the above program will be held in the new banquet hall of the Hotel Sinton which has been rushed to completion to meet this occasion. Ladies are invited to all the ceremonies of the day.



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This department of the Battle Creek Sanitarium, established in 1911, has a large and complete equipment of radium and all accessory appliances for radium-therapy, including both superficial and deep-seated lesions. An adequate supply of radium needles for direct contact treatment of deep-seated malignancies by actual introduction of radium into the tumor area X-ray therapy is used in conjunction with radium treatment whenever such combination is indicated.

All cases are thoroughly studied and detailed records kept. The benefits to be derived from this form of treatment are available to every one requiring such treatment. A fee is charged consistent with the financial condition of the patient.

The treatment of all cases is under the direct supervision of the surgeon in charge of the radium department in association with competent pathologists, roentgenologists and other helpers.

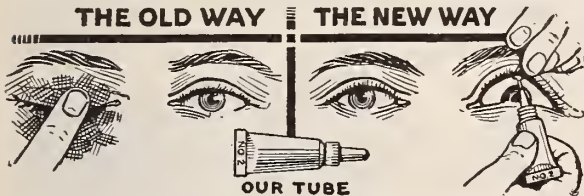
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Type AA Vulcan X-ray coil, new with tube and holder, cost \$286.00, will sell for \$190.00.

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## OHIO HOSPITAL NOTES

Trustees of the Montgomery-Prebble County District Tuberculosis Hospital are considering the advisability of adding Miami County to the district. Officials of the institution believe that the affiliation would result in financial benefit, as patients from Miami County are now received at the hospital but no funds are provided by the county for their expenses.

—Dr. Marion J. Reynolds, formerly assistant physician of Columbus State Hospital, has become superintendent of the Columbus Children's Hospital, succeeding Miss Lilly D. Atkinson, resigned. After a rest Miss Atkinson will engage in post-graduate work at Columbia University.

—Fifty Cincinnati negro churches are engaged in a drive to raise funds with which to purchase Seton Hospital, to be known as Mercy Hospital for Negroes.

—Dr. J. J. Hogan, president of Ashtabula Council, recently made an urgent plea to that body that the city give financial aid to Ashtabula General Hospital. It is said that the institution does at least \$2,000 worth of charitable or indigent work each year while receipts from the township trustees for such cases average less than \$100 a year.

—Papers for incorporation of the Shelby County Memorial Hospital were filed with the secretary of state in late September. The project is the outgrowth of a \$10,000 fund willed to the city by a resident eighteen months ago on condition that a like sum be raised by the city within three years.

—An organization known as the Hospital League for Ex-Service Men has been formed by Cincinnati women to assume responsibility for the proper treatment of soldiers who are patients in local hospitals.

—There has been an erroneous impression that under the contract which the United States Public Health Service has with Rocky Glen Sanatorium, McConnelsville, the entire institution is reserved for tubercular ex-service men. The government contract calls for only one-half of the institution and the remaining half is available for private patients.

—Miss Isobel Woodburn, new superintendent of nurses at Protestant Hospital, Columbus, has instituted an eight hour day and ten hour night for student nurses. An effort is being made to enroll 20 additional students for the course, which has been extended to include instruction in the department of public health nursing of the medical school of Ohio State University. Hospital officials declare that only 250 nurses are registered in Columbus, while the city needs 1,000.

## Radium Laboratory

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## Plans to Extend Benefits of Institutional Care

Recognizing the inadequacy of sanatorium facilities in Ohio for the care of all tuberculosis cases, Dr. F. C. Anderson, new superintendent of the State Sanatorium at Mt. Vernon, is planning an extension service that will make his institution an educational center for the training of physicians and the public in the prevention of tuberculosis.

The sanatorium for the care of tuberculosis is generally looked upon as the most effective weapon in the campaign against the disease. While Ohio has fifteen institutions of this sort, state, city and private, with a total bed capacity of about 1,600 and caring for 3,500 patients a year, it is admitted that the state is only "scratching the surface" in dealing with the problem. There were more than 6,500 deaths from tuberculosis in Ohio last year, and it is estimated that there are at present 63,614 active cases in the state; that 13,524 children are exposed to the disease and may die before they reach middle life unless protected.

In view of these facts, Dr. Anderson has asked the cooperation of the medical profession and the public, through the Ohio Public Health Association, which represents the organized movement in the state against tuberculosis, to the end that a larger service may be rendered by the state in combating this disease.

He points out that the state sanatorium has gone along caring for about the same number of cases each year. It can accommodate only about 180 patients at a time and always has a long waiting list. There is ample justification in the results for every dollar spent by the state on sanatoria treatment for the tubercular, but with the expenditure of additional effort and some money much could be accomplished.

The extension plan proposed consists of the holding of tuberculosis clinics in various parts of the state for the discovery of cases and the education of the public, and the establishment of a continuous institute in the sanatorium for the benefit of physicians that they may be better able to recognize the disease in its incipency and recommend proper treatment. Instead of having physicians come to the institution for study at a stated time, it is the aim to have a regular schedule in which physicians may spend ten days or more there to observe methods of diagnosis and treatment.

Dr. Anderson was assistant at the Mt. Vernon Sanatorium when it was established about ten years ago. After an absence of several years, during which time he was in military service, he has returned as superintendent with a broader outlook of the tuberculosis problem. The Ohio Public Health Association has assured him of its willingness to cooperate with him in the establishment of clinics and Council of the Ohio State Medical Association at a recent meeting commended the work.

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## MEETINGS OF ACADEMIES

### Cincinnati Academy

(O. J. Seibert, M. D., Secy.)

SEPTEMBER 27: Case reports from the Cincinnati Tuberculosis Sanitarium, Drs. R. J. Erickson, Nora Norton, J. B. Rogers.

OCTOBER 4: Section on Specialties, Dr. A. Ravogli: "Folliculitis Laevolis," with lantern slides.

OCTOBER 11: Section on Surgery, Dr. James W. Rowe, "Treatment of Pelvic Inflammation."

OCTOBER 25: Case Reports by Dr. J. Louis Ransohoff, on "Abdominal Hemorrhage from Uterine Fibroids."

### Cleveland Academy

(Lester Taylor, M. D., Secy.)

The 163rd regular meeting of the Academy of Medicine of Cleveland was held at the Hotel Winton, September 23, as a dinner meeting, or "Academy Night." The regular order of business was set aside and Mr. T. F. McDonald, chairman of the Speakers' Committee of the Advertising Cleveland Commission, gave a splendid talk on Cleveland, well illustrated by slides.

Dr. G. E. Follansbee, chairman of the Compulsory State Health Insurance, made a short but pithy talk on this subject and illustrated his remarks by extracts from the Myers bill introduced in the legislature last session. Dr. Lester Taylor, discussed "The Future of Academy Membership" with its responsibilities to the community. Ex-

ecutive Secretary Wells reported on the work of the last four months in the Academy office under the new plan and showed slides illustrating the financial condition, membership and duties of the executive office.

Guests of the evening included Dr. H. M. Platter, secretary of the State Medical Board, who spoke of the relation of the local society to the board, and Mr. Don K. Martin, executive secretary of the State Association. Attendance 111.

### COUNCIL MEETING

The regular meeting of Council of the Cleveland Academy was held, September 15:

Before proceeding to the regular business Mr. Frank F. Chapman, superintendent of Mt. Sinai Hospital, presented an outline of the proposed bill for licensing of hospitals. The bill provides for a minimum standard which shall be necessary to secure a license, the license to be re-issued each year after an inspection by the State and satisfactory evidence that the requirements have been met. The question was thoroughly discussed and the matter referred to the Legislative Committee for report and recommendations at the next meeting.

Reports were made by the following committees: Membership, Program, Compulsory State Health Insurance, Publication, Committee on Special Classifications, and Revision of the Constitution. Transfer of Dr. Theodore A. Willis from the Cerro Gordo County Medical Society, Iowa, was approved.

Committee on Special Classifications and committee on Revision of the Constitution.

A communication from the Visiting Nurses Association requesting the endorsement by the

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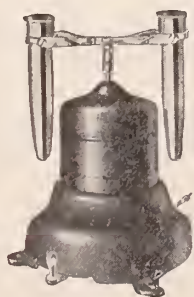
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Academy of proposed standing orders for pregnant women was referred to the Public Health Committee, for approval.

In the absence of Dr. Berkes, Mr. Wells submitted a report of the Auditing and Collection Committee, which embraced a plan for the installation of an accounting system for use of the members of the Academy. It was the sense of the Council that such a plan was not feasible and that it was preferable to join, if possible, as a body, the Retail Credit Men's Association. The report was referred back to the committee for further investigation.

Dr. Cummer was appointed chairman of a committee to procure, if possible, a framed portrait of each of the former presidents of the Academy, these portraits to be hung in the Auditorium.

### Columbus Academy

(James A. Beer, M. D., Secy.)

SEPTEMBER 20

"The Physician and the Public Health,"—A. W. Freeman, M. D., State Commissioner of Health.

"Nine Months Operation of the Hughes-Griswold Law,"—Frank G. Boudreau, M. D., Chief of Bureau of Communicable Diseases, State Department of Health.

OCTOBER 4

Symposium on Obstetrics—"Persistent Occipito-posterior Position," W. D. Inglis; "Face Presentation," Andrews Rogers; "Transverse Position," Sylvester J. Goodman; "Breech Presentation," E. H. Ryan. Discussion by Drs. Wayne Brehm, W. E. Duffee and C. E. Turner.

OCTOBER 11

Recent Developments in the Study of the Heart—"Myocardial Changes," E. J. Gordon; "Endocardial Changes," H. A. Minthorne; "Aoritis," J. W. Sheetz; "Functional Disorders," R. A. Ramsey. Discussion by Drs. Frank Winders, H. W. Whitaker and H. B. Blakey.

OCTOBER 18

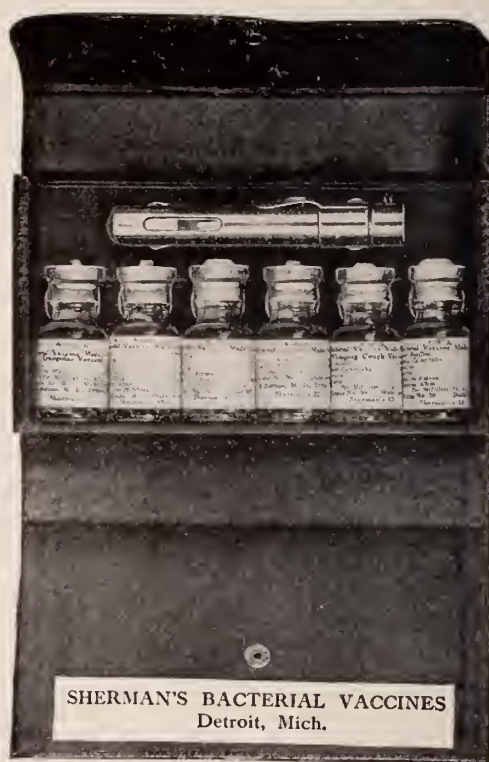
"Child Welfare Work,"—J. H. Mason, Jr., M. D., Baltimore, Md.

### COUNTY SOCIETY REPORTS

#### SECOND DISTRICT

Greene County Medical Society had as its guest on October 7 Professor John Uri Lloyd of Cincinnati, who addressed the society on "The Newer Developments in Chemistry." Professor Lloyd's talk was intensely interesting, being illustrated thoroughly with experiments.

Montgomery County Medical Society's October 1 meeting was devoted to the installation of officers and the reports of retiring officers and committees. The new officers are: Dr. A. F. Shep-



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herd, president; Dr. Robert Austin, secretary, and Dr. F. D. Crowl, treasurer. "Pneumonia" was the subject of a paper read by Dr. A. B. Brower at the October 15 meeting.

#### THIRD DISTRICT

*Allen County* Medical Society held its regular session at the Lima State Hospital, September 21. Number of members present 40, nurses 20, visitors 40.

The lecture of the evening was given by Dr. Charles Clark, Superintendent of the Lima State Hospital, followed by a clinic of four cases showing different kinds of insanity. Case I, Catatonic Mania. Case II, Acute Mania. Case III, Diagnosis not positively determined being very difficult. Wassermann, negative. At present a lucid period. Patient soon to be dismissed. Case IV, Boy of 19 years, brought from Mansfield Reformatory. Supposed to be Dementia Praecox. Now practically well and soon to be dismissed.

Dr. Vorbau, assistant to Dr. Clark, also read an unusually interesting paper on "Epilepsy," and presented seven different cases, one of which had been in an institution for 30 years, and had, at least, one seizure or paroxysm every day and sometimes two or three.

The next bi-monthly meeting was held at Memorial Hall, October 5, with 40 members present.

Dr. Oliver S. Steiner read a paper on "Fractures" treating the subject in a general way, touching a little on the technique, making a very interesting, practical and profitable paper. The discussion was opened by Dr. Roush, followed by Drs. Parent, Baxter, Poling, Rudy and closed by Dr. Steiner.

Miscellaneous business brought out quite a discussion on the subject of medical inspection of school children, resulting in the appointment of a committee of three to confer with the Board of Health and Superintendent of Schools.—A. S. Rudy, correspondent.

#### FOURTH DISTRICT

*Sandusky County* Medical Society members were the guests of Dr. S. McKenny at dinner at the Hotel Fremont, Fremont, September 30. After eats the members enjoyed a paper on "Paralysis Agitans," by Dr. E. M. Ickes, who added interest to the meeting by presenting a typical case. At the business session a number of pertinent questions arose and among these the legislative situation received attention. A vote of thanks was extended to the county commissioners and to Colonel and Mrs. Hays for the interest shown in Memorial Hospital. A vote of thanks was also given Dr. McKenny for his entertainment. Attendance at the meeting was better than fifty per cent. in spite of the fact that there were a number of counter attractions.—C. I. Kuntz, Secretary.

#### FIFTH DISTRICT

*Erie County* Medical Society, meeting in Fre-

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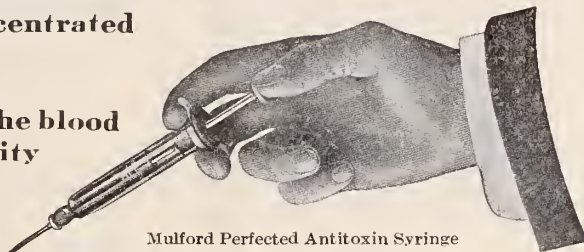
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mont, September 30, listened to a timely paper by Dr. G. H. Bremer on "Colds and Coughs." Dr. J. F. Leblieq's contribution to the program was an interesting paper on "Gonorrhoea." Meetings held by the society throughout the past year have been well attended and full of interest and enthusiasm.—F. F. Lehman, President.

Lake County Medical Society met at Lake County Hospital, Painesville, October 4. After the usual reports and other routine business, Dr. George I. Bauman of Cleveland gave a very instructive address on "The Surgical Treatment of Infantile Paralysis." The address was technical, yet simple and practical. Dr. Bauman opened by stating that the cause of infantile paralysis is an unknown virus, and that the lesion is in the cells of the spinal cord. One or more groups of muscles may be affected, as the leg, the arm, the face, the abdominal muscles, but the lower extremity is usually the site of attack. The cerebral type is rare and fatal. The disease occurs most frequently in the fall or autumn, September being the month of most outbreaks. In the matter of treatment, Dr. Bauman emphasized the importance of absolute rest in bed, hypertension, massage after the soreness is gone, and avoidance of deformities by the use of casts, braces and splints. Braces aid in locomotion and help to avoid deformities and contractures, which are responsible for deformities, but they must be simple and light and carefully fitted by the physician in charge. The good muscle is usually the one affected. Speaking of different operations, Dr. Bauman recommended tenotomy, V shaped cut, tendon splitting, dividing the muscle, and muscle transplanting. Arthriden's was recommended when paralysis is in the big toe. Prognosis is usually good.—E. S. Jones, Secretary.

#### SEVENTH DISTRICT

Jefferson County Medical Society held its regular monthly meeting at Steubenville, October 12. Following the presentation of clinical cases and case reports, Dr. F. B. Harrington of Weirton, West Virginia, spoke on "Epidemic Cerebro-Spinal Fever and Some of Its Lessons, Drawn from Latter Day Experience." Discussion was opened by Dr. C. B. Terwillegar.—J. R. Moss-grove, Secretary.

#### EIGHTH DISTRICT

Morgan County Medical Society enjoyed a dinner meeting at the Malta Hotel, September 30, with nine members present. The speaker of the evening was Dr. C. H. Higgins of Zanesville whose subject was "Boils." Discussion was led by Dr. R. B. Bainter, also of Zanesville.

Muskingum County Medical Society's October meeting was held in Zanesville on the 6th. The program consisted of papers by Dr. Granville Warburton on "Developments and End Results in Obstetrics," and J. T. Davis on "Bacterins in Every Day Practice."—Maurice Loebel, Secretary.

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## Portage County Chosen for Health Demonstration of the State Health Department

In the September number of this *Journal* mention was made of the plan of the State Department of Health to carry on a health demonstration in a rural Ohio county. Fifteen counties applied for the demonstration, and all promised active cooperation. A committee of the staff of the Department made a close study of the advantages of each county, and eliminated all but Medina and Portage for various reasons. Letters were received from practically every organization in these counties, and a number of delegations came to Columbus to solicit the demonstration. Dr. A. W. Freeman, State Commissioner of Health, and Dr. F. G. Bourdeau, in charge of communicable diseases, visited Medina and Portage counties to investigate the advantages and disadvantages of each at first hand. In each county a meeting was held with the medical society, and in both all members of the profession were very anxious to have the demonstration, and promised their full cooperation. Another meeting was also held in each county at which were present representatives of all official and voluntary organizations and large industries. All of those present at these meetings expressed themselves as favorable to the demonstration,

after its plan and organization were explained.

It is not necessary to repeat here details of the general plan of the demonstration, as these may be found in *The Journal* for September. The points most emphasized were:

1. That the demonstration is planned to give health commissioners in Ohio an opportunity to observe and study a really efficient rural health department. At the present time a health commissioner who wishes to study rural health work must observe one phase in this county, another in a second county and a third in still another county.

2. The demonstration will not be full fledged from the start. The first step will be to extend the public health nursing service until it is complete,—the second to provide for complete physical supervision of all school children, including the correction of all remediable defects,—the third will consist of a pediatric service, so that no infants in the county will be without the best possible nursing and medical attention. Other branches of work will be taken up as the demonstration gains momentum. Of course it is understood that the ordinary work of a health department such as the prevention of communicable dis-

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eases and the enforcement of sanitary measures will be carried out with great care.

3. The demonstration is essentially a local piece of work. It will be carried on by the local health department with the assistance and advice of the State Department of Health. The county which is to receive the demonstration will be expected to supplement the budget of the health department to a sufficient degree to carry on the proposed work.

All the information collected concerning Medina and Portage counties was presented to a committee of the staff of the State Department of Health, which decided to stage the demonstration in Portage county providing certain minor conditions were arranged to the committee's satisfaction. Portage county has two important advantages—excellent roads and other transportation facilities and hospitals facilities—which other counties lacked, and these advantages, among others, caused the committee to award the demonstration as it did.

While Portage county will probably profit more from the demonstration than any other county, the object is to make it valuable to the entire state. It is, in a sense, an experiment, and if successful, as it seems bound to be, will react favorably upon the health work of every other county.

It speaks well for the state of Ohio that so many counties should desire this advanced health service, and that so many persons not connected with the health department or medical profession should realize the pressing need of adequate health protection.

The actual work will probably start January, 1920, and reports concerning its progress will be given from time to time in these columns.

#### Medical Group Planned at O. S. U.

A plan for the segregation of all medical buildings and hospitals in connection with the Medical Department of Ohio State University has been approved by trustees of the university, and architectural work on what promises to be one of the most extensive medical and hospital units in the country has been started.

Details of the proposed structures are now being worked out by university architects. The group is expected to include a large and thoroughly modern hospital for the college of medicine and a spacious home for nurses; a medical research building; building for the dental college; and an enlargement of present Homeopathic Hospital facilities made possible by a special gift for that purpose recently. All of the buildings will be located in a U-shaped group overlooking the new athletic field at the university, on which will be erected the million dollar stadium.

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August 7, 1920

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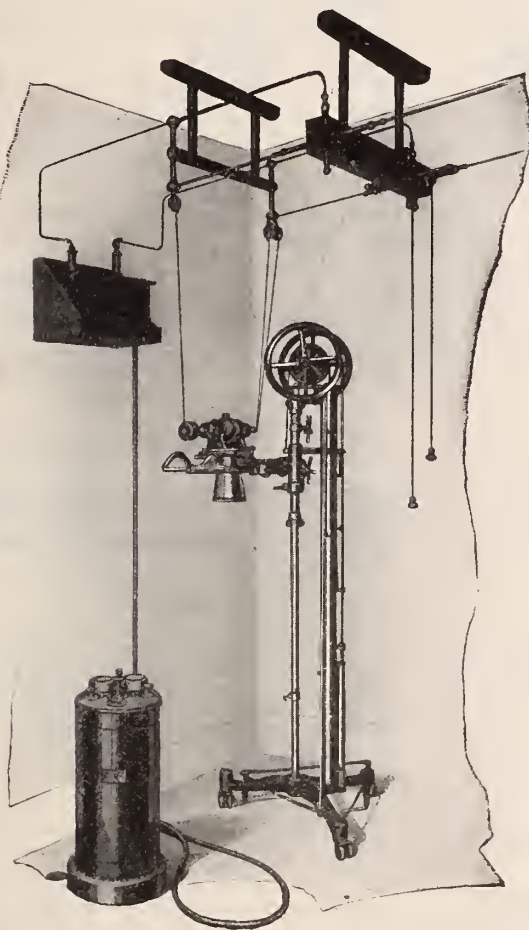
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## NEWS NOTES OF OHIO

**Cincinnati**—Announcement has been made of the marriage of Dr. Ralph Goldsmith Carothers and Miss Helen Buchanan Holmes at Vernonville, this city, October 5. Dr. Carothers is the son of Dr. Robert Carothers, councilor of the First District of the State Association.

**Gallipolis**—Dr. Edwin J. Rose has moved from this city to Chicago, where he is connected with United States Public Health Hospital No. 30.

**Bellefontaine**—Dr. G. H. Swan attended the recent convention of the American Roentgen Ray Society in Minneapolis.

**Marion**—Dr. C. E. Sawyer was chosen vice-president of the American College of Surgeons at the annual election of that organization in Montreal, October 14.

**Canton**—Dr. T. C. McQuate, coroner of Stark County, and Miss Dessie Graybill, a teacher in Massillon High School, were married September 29.

**Albany**—Dr. A. F. Holmes, a former practitioner here, has become assistant superintendent of Toledo State Hospital.

**East Palestine**—Dr. Edward J. Barcal, 64, died in Chicago, September 8. Dr. Barcal came to East Palestine as an agent of the United States Public Health Service during the influenza epidemic of 1918-1919, and later entered private practice here, continuing until June of the present year.

**Columbus**—Miss Augusta M. Condit, assistant superintendent of the District Nursing Association, received minor injuries when she was struck by an automobile, October 1.

**New London**—Dr. M. W. Jacoby, who practiced in this city for a number of years, has located in Detroit.

**Delaware**—Dr. V. B. Weller assumed his duties as a major in the Army Medical School at Washington, D. C., October 15.

**Dayton**—Dr. and Mrs. H. Palmer are recovering from injuries sustained when their machine overturned near Medway in September.

**Jefferson**—Dr. G. T. Wasson, recently appointed health commissioner of Ashtabula County, has located here. Dr. Wasson was formerly a resident of Orwell.

**Cleveland**—Dr. H. J. Gerstenberger, director of the local Babies' Dispensary, attended sessions of the American Child Hygiene Association in St. Louis, October 10-12. Drs. R. A. Belt of California and E. A. Peterson, Washington, D. C., former Clevelanders, were also present.

**Dayton**—Dr. B. W. Beatty was elected state governor of the Ohio Lion's Club at its first annual convention, in Columbus, October 14.

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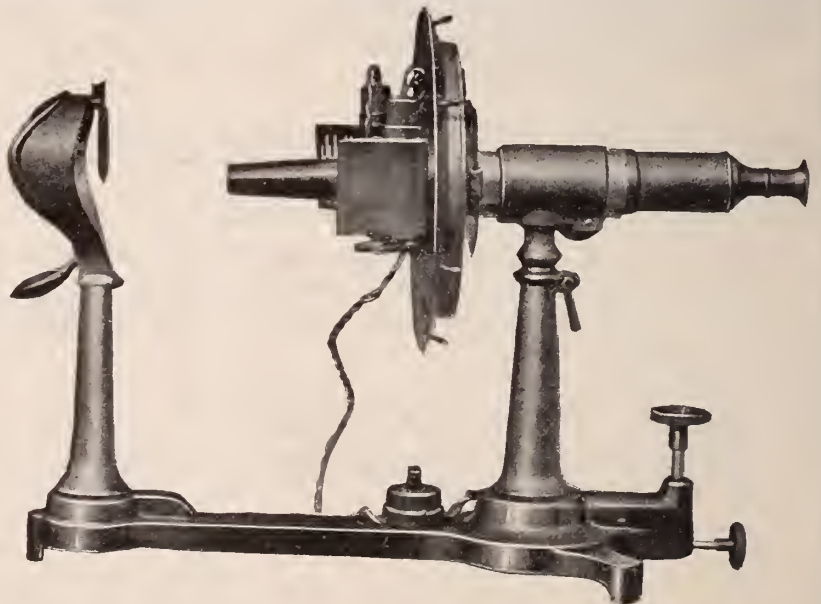
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131 East State Street, Columbus, Ohio  
Telephones: Ohio State 4905; Bell Main 5259

This journal is published for and by the members of the Ohio State Medical Association. It endeavors to maintain a high standard of advertising. Its advertising policy is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription \$3.00 per year; single copies 25 cents.  
Issued under the direction of the Publication Committee.

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## EDITORIAL COMMENT

by D. K. M.

### The Answer Is "Yes"!

"Are you a member of the State Association?" is asked every expert in medicological cases. The fraternal feeling engendered by fellow membership is productive of extended acquaintances and courtesy and yields a dividend of greater value than its mere work in dollars.

"If there are good reasons for joining your state society, there are better ones for taking an active part in its proceedings. If you have views, proclaim them. A dumb man makes a poor auctioneer. If you want something done, help do it. A dead man cuts no ice. Get busy, make yourself a factor, your opinion worth while, your presence felt, but if you don't do any of these things, don't holler and say the society is run by a clique, if you are not elected as the next president," says one writer on the subject.

\* \* \* \*

In this day, when every profession, trade, calling, business, and enterprise is organized, it seems trite to recall the advantages resulting from a strong, active, alert, progressive organization of physicians.

The chief advantages may be briefly summarized:

It raises the tone and standard of the profession in its community. You will find the most progressive physicians in the local society; the new practitioners cannot afford to remain out. The influence of the men who have established themselves in the community carries great weight with the young physicians and also those whose ideals are not instinctively high. The ethical standards of the profession must be maintained by all of its members; the man who may be tempted to ignore these standards knows that he cannot do so and retain his own standing in the profession.

An organization of physicians meeting regularly offers its members not only an opportunity to know each other intimately, but also to keep abreast of the times in medical and surgical achievement. A regular program, with reports on cases, insuring study and thought, will guarantee to the community happy enough to have such a live organization the highest type of health protection and safety.

The persuasive power of the physicians of this state on matters affecting health, sanitation, medical education is great. Completely organized, this influence would be almost absolute. When the medical profession is completely organized in this state, it can get from both state and municipal authorities laws and ordinances covering matters of vital importance to the health and happiness of every man, woman and child in the state.

While the Medical Association is not a political organization and will never become one, its judgment on proposed legislation affecting health, sanitation, the care of diseased persons and the protection of the communities against infectious and contagious diseases should be readily available to members of legislative bodies. When its opinion on these matters as well as on proposed laws affecting the practice of medicine in this state is advanced, if it has the backing of powerful organization, it can speak with authority.

\* \* \* \*

Don't risk the loss of your membership in this, your State Association. On it directly depends your membership in your local society; on it depends your membership in the American Medical Association; on it depends largely the rating which your community gives you as a physician.

Membership in the State Association has been steadily growing, due directly to the activity and the interest of the members in the component county societies. The officers of your local society are busy men who by virtue of the fact that they hold office are devoting their time unselfishly to the profession as a whole. Cooperate with them and with the profession of the state by paying your membership dues for 1921 promptly. As you know, they are due and should be received at the office of the State Association *before* January 1, 1921.

### Green On Health Insurance

Those of you who had the privilege of hearing Dr. Frederick R. Green, secretary of the Council on Health and Public Instruction of the American Medical Association, in the presentation of his paper on compulsory state health insurance at the last annual meeting of the Ohio State Medical Association in Toledo agreed generally his paper was perhaps the most comprehensive and at the same time concise and effective that the profession had yet had an opportunity of hearing.

In view of the fact that a proposal on health insurance is one of the important issues pending in the next Ohio legislature, Dr. Green's paper is reproduced in this issue of *The Journal* on page 931 so that every physician in Ohio may have the opportunity to fully study the problem well in advance of any possible legislative action.

Dr. Green is not only a close student of national and state medical problems, but is an accurate interpreter of the trend of the day in social and economic movements. He has concisely discarded the chaff and illogical opinions on the subject of state insurance or state medicine, and has reached and presented the fundamental considerations.

Salient features of Dr. Green's conclusions are: That it is not insurance, but a subsidy; that it is an economic problem, the concern of all the people, but vitally of the physician, without which it cannot be; that our profession is ineffective most-

ly in the matter for the reason we only consider the medical aspects involved, neglecting the important economic angles. He denies the very generally repeated claim that it is "inevitable," therefore must be; doubts if it is applicable in present form to democratic United States; questions if it is needed, finally summing up with opinion that it must be proved by proponents of the plan:

First: That there is a disproportionate amount of sickness among employed persons, causing loss, incapacity, and poverty greater than that of the average person.

Second: That financial burden on the laborer due to sickness is more than he can bear.

Third: That present methods of promoting public health and disease control are inadequate.

Fourth: That compulsory, state supervised sickness insurance is the best remedy for the condition.

Until these basic facts are proved he believes there can be no effective action.

Physicians should know of and appreciate the injurious effects of studying our own phase of the matter, neglecting the broad economics involved, and the disastrous results of holding aloof from active work in solving the problem. Citing England and its acts, he says that in formulating this most important concern of the physician, impossible of execution without his co-operation, Lloyd George consulted employer, employe, fraternal societies; every possible interest, without the slightest consultation or advice from the doctor. This product of Dr. Green's studies should be carefully studied by every physician in Ohio.

### Prohibition Enforcement Stringent

In House Bill No. 620, commonly known as the Crabbe Act, which Buckeye voters approved November 2, Ohio has a prohibition enforcement measure with extremely sharp teeth. The word "liquor" of the phrase, "intoxicating liquor," in the act is construed to mean alcohol, brandy, whisky, rum, gin, ale, porter, beer, wine or any distilled or fermented compound, whether medicated, proprietary or patented, containing more than one-half of one per cent. of alcohol.

\* \* \* \*

Liquor for non-beverage purposes, including that secured on physicians' prescriptions and by physicians for their own legitimate use in the regular practice of their profession is not affected by the new act, which on this subject is in accordance with the provisions of the act of Congress known as the National Prohibition Act already effective in this and other states.

A result much hoped for may be secured under the Crabbe Act—that of the elimination of or at least material reduction of the traffic in so-called patent medicines and tonics used extensively for



beverage purposes. If no other effect is secured, this result will more than justify the law.

\* \* \* \*

Physicians of Ohio who hold permits under the National Prohibition Act to prescribe or secure intoxicating liquor, have been notified by state prohibition director, J. A. Shearer, to apply for renewals as the present permits expire on December 31. There are about 1800 Ohio physicians now holding such permits and almost 6000 manufacturers and druggists.

Persons applying for permits or for renewals must give their names or firm names with correct address, with a complete statement of the purpose and under what circumstances the liquor is to be used, and the approximate quantity required.

Proper forms may be secured by applying directly to the state prohibition commissioner, Columbus, Ohio.

#### University of Cincinnati Medical Bulletin

The initial number of the University of Cincinnati Medical Bulletin was published in connection with the celebration of the one hundredth anniversary of the College of Medicine in November. The bulletin was endowed in the will of the late Dr. Christian R. Holmes, dean of the Medical College, in the aim of promoting a cohesion of medical interests through an accessible medium for recording medical activities.

The centennial issue, a fore-runner of the bulletin as a regular periodical, is largely devoted to historical articles covering the medical growth of Cincinnati in all its phases.

A number of editorials eulogize the memory of Dr. Holmes, through whose tireless efforts and staunch faith in his undertaking the medical department of the University has come to its present stage of efficiency. Readers of *The Journal* will be interested in the following from the pen of Dr. Martin H. Fischer, professor of physiology:

#### DULIA

The prairie schooner winding its way westward, filled with souls seeking an ideal, stops when it has ascended a hill to look backwards over the ill-marked road traversed. Thus, today, with faces still turned to a newer and hope-filled west we gaze back upon a panorama, whose horizon measures a century and in the encompass of which are the wheel marks of paths traced, retraced and traced again to that plateau upon which now we stand.

Covered, as we are today, by a canopy woven for us by a stalwart leader we rest, perhaps, too languidly in its pleasant shade. Unannoyed by heat or rain it is well to review the journey and to ask which of its parts have been essential.

We have been mired, the sandstorms have cut our flesh, our bodies have wearied in effort—but forgotten are these things in the knowledge that

we have been on our way. Because our hands were not sufficient and our feet too weak, we built equipment—wagons for our weary and shelters for our ill. The wagons have gone the way of time; and one shelter after another, each glorious in its day, has been forgotten in its successor—as all have disappeared in the new one now before us. To us this resting place may seem as the end of a pilgrimage. But others have so felt before us towards theirs. Obviously nothing material has outlasted them; and, should we confess it, nothing material will outlast us.

What we celebrate today is either something less or something more than the ponderable thing. If we feel joy, it is the joy of going; and if aught that is secure has remained in our hands, it is the memory of our men and of their faiths.

We raise no monument to the memory of those who said it could not be done; nor will stones arise for those who inform us that, being done, they thought so, also. We cherish the memory of first believers only; there are no great acceptors.

If we are content to have come thus far, to what men do we owe it? Certainly to none who was in his day satisfied to confess a roadbed hard or a rivulet the waters of Eden. We record none who acknowledge his present the best of all living worlds. Not they who sang us siren songs have driven us hither, but the gadflies stinging us when the heat was already intolerable.

We have to remember this when tomorrow we journey on. Great men do not soothe; great journeys are not comfortable; great goals are not met but must be attained. The experience of a century should teach us method. Our leaders will again show us mountains to be climbed to reach the valley beyond—and stand alone; and too many of us will follow the crowd because the path down the river is easy. But El Dorado lies in the seers and with sweat and toil over the mountains.

To mark our resting place we leave behind a monument—on its one face the names of the masters gone before; the other blank for those to grave upon who will.

#### State Meeting Essayists

Members who anticipate taking part in the program of the next annual meeting, to be held in Columbus on May 3, 4 and 5, are urged to communicate immediately with the officers of the sections before which they expect to speak. Dr. Hugh A. Baldwin of Columbus, secretary of the Section of Dermatology, Proctology and Genito-Urinary Surgery, advises that there are still a few openings on the program of his section, and the same statement may be made for other sections. The officers of these sections, whose names and addresses were published in the October issue of *The Journal*, will be glad to hear from prospective essayists.

—Merry Christmas—

## Non-Union in Fractures\*

Carl DaCosta Hoy, A. M., M. D., F. A. C. S., Columbus

**Editor's Note**—Among the common causes of non-union in fractures, which Dr. Hoy discusses in his paper, may be mentioned fibrous connective tissue between the ends of bone, too perfect immobilization, too much motion, improper use of foreign bodies, infection and general constitutional diseases. In referring especially to the use of foreign bodies, Dr. Hoy decries their use in the handling of non-unions and in compound fractures as well as in the presence of infection. Of the constitutional diseases involved non-union occurs most frequently among diabetics, syphilitics and the tuberculous. Dr. Hoy warns against any hurry to operate until every conceivable method of stimulating osteogenesis has been tried. Strict asepsis and painstaking technique are vital in the operative management of non-unions and failure is usually due to too small a transplant, not sufficient immobilization or infection, causing a sequestrum of the transplant.

### INTRODUCTORY REMARKS

**T**HE subject of fractures, in the past, has been a very perplexing one, as to the correct form of treatment with especial reference to the handling and management of certain types of fractures and the indications and contra-indications for the operative treatment of this class of work. Formerly, many were satisfied with a functional result in the presence of mal-union, vicious-union and shortening. The time is fast approaching, however, when the patients themselves will insist on a proper anatomic result as well as a functional result. The class of fractures that I wish to deal with in my talk today, are those fractures in which non-union is present. It seems to me that non-union in fractures, is greatly on the increase and I sometimes wonder where all of these non-unions are coming from, and ask myself the question: What are the causes of *non-union*?

I heard my father, the late Dr. W. S. Hoy, who had a large experience in traumatic work, say that he had only one case of non-union, that he could call true non-union, in an experience of 25 years. I have often heard the late Dr. John B. Murphy remark, that during his early experience in Chicago, at the Alexian Bros. Hospital, and at Cook Co. Hospital, before fractures were being operated on to any great extent and before plaster of Paris was being used by the majority of physicians and surgeons who handle these conditions, that he had seen only one case of non-union. During the later years of Murphy's life, he operated on hundreds of cases of non-union.

The ideal treatment for non-union is an autogenous transplantation of bone. Bone transplantation has been successfully done for centuries. The earliest report that we can find dates back to 1689.

### CAUSES OF NON-UNION

*First*—Fibrous connective tissue between the ends of bone.

*Second*—Too perfect immobilization.

*Third*—Too much motion between ends of bone.

*Fourth*—Improper use of foreign bodies.

*Fifth*—Infection.

*Sixth*—General constitutional diseases.

### INTERPOSITION OF FIBROUS CONNECTIVE TISSUE

*First*—Most frequently we find an *interposition of fibrous connective tissue between the ends of the bone*. This fibrous connective tissue is the result of—either fatty tissue, muscular tissue, capsule or fibrous connective tissue or any combination. This tissue at the time of the accident or during manipulation, in an attempt to reduce the fracture, is interposed between the bones and the osteoblasts and fibroblasts are not able to penetrate this membrane; hence after a time, the bones become eburnated, and more or less absorption takes place with a resultant bone atrophy. The fibrous connective tissue and periosteum grow over the proximal and distal ends of the bone and in some cases form a pseudoarthrosis.

### TOO PERFECT IMMOBILIZATION

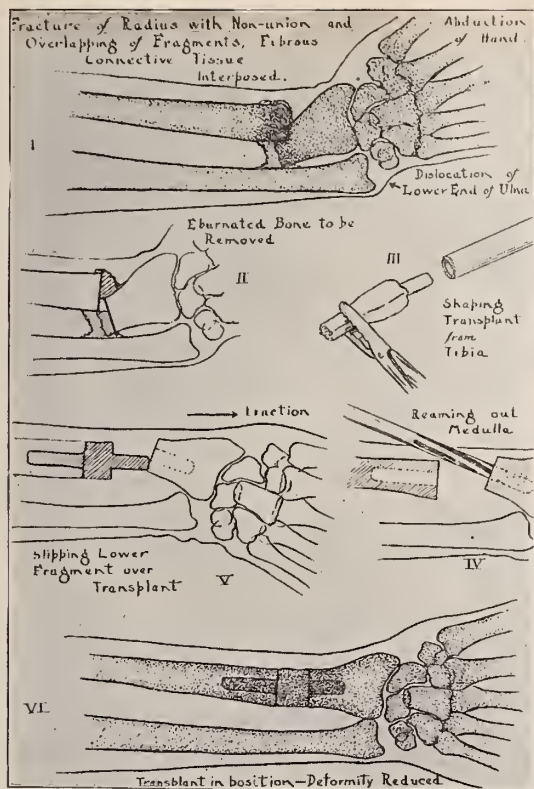
*Second*—Failure of union, with perfect apposition of the fragments and apparently no interposition of fibrous connective tissue, is usually due to *too perfect immobilization with plaster of Paris*. Absolute immobilization of a fracture is not conducive to the greatest reproduction of bone callous.

*Third*—*Imperfect immobilization of a fracture*. This allows too much motion between the fragments, which disturbs the fibroblasts and the osteoblasts, causing at times a fibrous union, a delayed union and at times a non-union. Under this heading also would come an imperfect reduction and apposition of a fracture.

*Fourth*—*Improper use of foreign bodies*. They should never be used in the treatment of non-union, as they tend to decrease osteogenesis primarily. If we are going to use foreign bodies in the treatment of a certain class of fractures, we must know the indications and the contra-indications for their use. To my mind the Lane plate put in with cortical cells is one of the most valuable aids we have in the treatment of a certain class of fractures. There has been a great deal said and a great deal written concerning the Lane plates and the Lane plate treatment has been blamed for a great many bad results which were not due to their use, but to their misuse and the misapplication. Failure in the use of

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

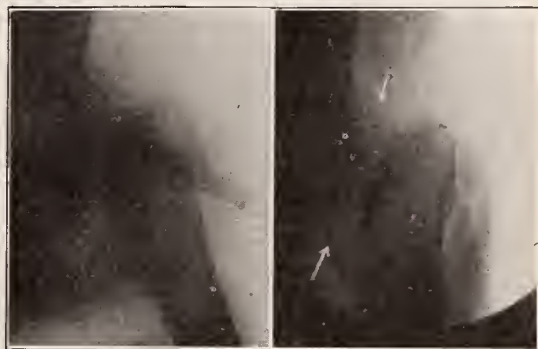




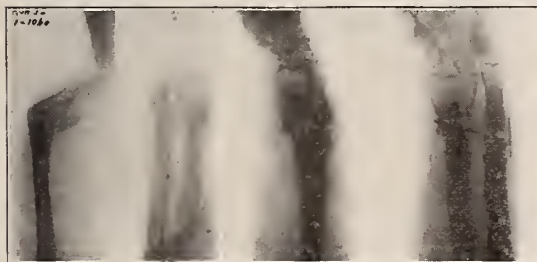
No. 1. Non-union at lower third of radius showing cross transplant which takes care of loss of bone or shortening—Dr. Hoy's original operation for this condition.



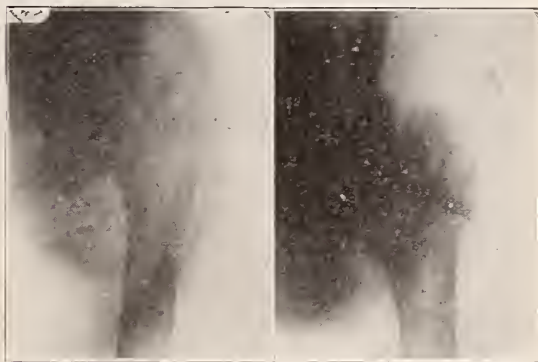
No. 4. (From left to right)—(a)—Fracture of femur middle third. Bone transplant wrongly put in elsewhere at time of accident. Result, non-union with considerable bowing. (b) Same case. Non-union at middle third of femur. Lane plate wrongly applied elsewhere for non-union, sixteen months after first operation. (c) Bowing of femur with non-union still present. (d) Same case. Shows application in interosseous transplant with nails. Alignment good, some bone callus around ends of bone, six weeks after third operation.



No. 5. (Right) Non-union of neck of femur, two and one-half years' duration. Patient had six per cent. sugar. (Left) Bone peg in position. Correct apposition of fragments. Perfect functional result.



No. 2. (Left) Non-union of radius and ulna. Four years' standing. (Right) Picture of same after operation. Interosseous transplant with nails. Perfect apposition.

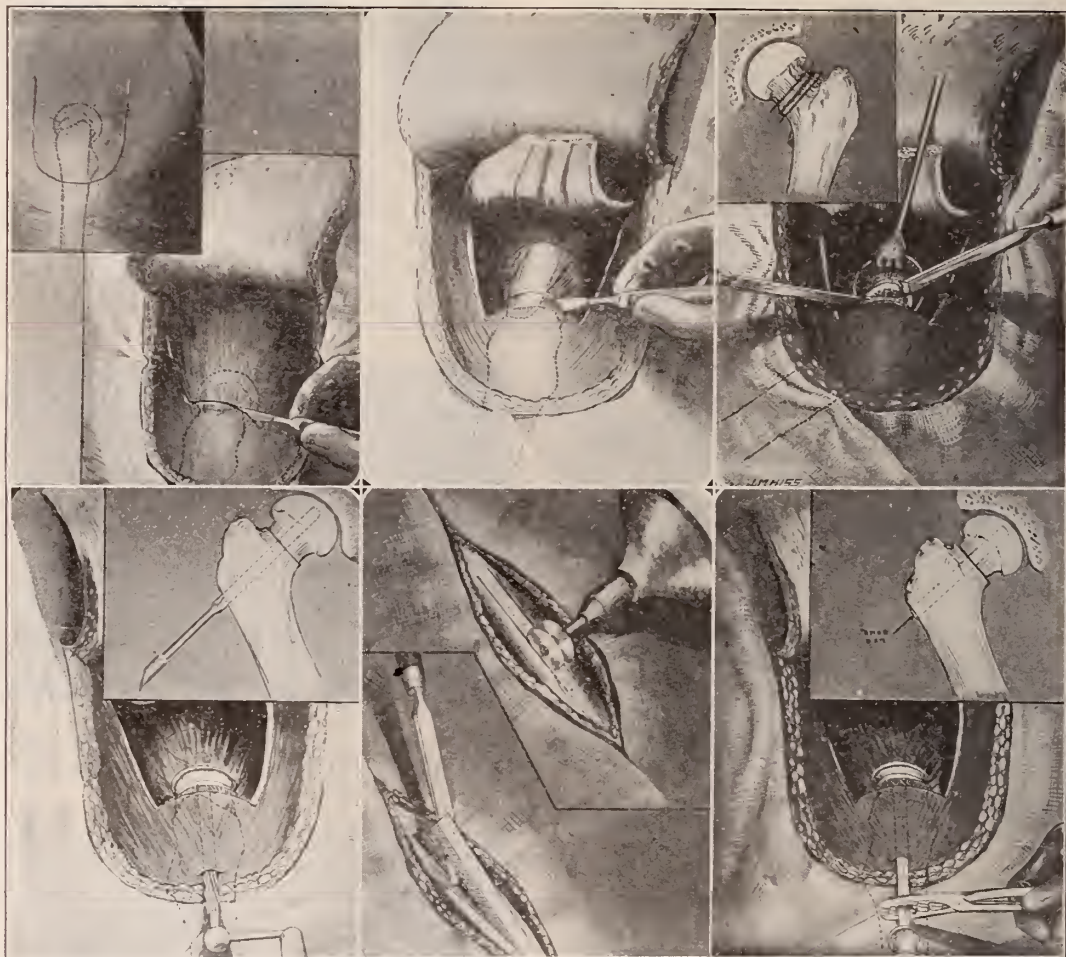


No. 6. (Left) Non-union of neck of femur, male aged 65. Duration four years. (Right) Bone peg in position. Correct apposition of fragments. Perfect result. No shortening.



No. 3. (Left) Non-union of ulna with dislocation of headed radius. One year duration. (Right) The same after operation. Interosseous transplant.

No. 7. (Left) Fracture of lower end of femur. Case is one in which a proper anatomic reduction could not be made. (Right) Two weeks later a Lane Plate was inserted. This picture shows Lane Plate with perfect apposition.



No. 8. Group showing Dr. Hoy's technic for operation on hip for non-union of neck of femur. (Upper Row)—(a)—Shows incision skin retracted. (b) Muscles and capsule cut. (c) Chiseling out neck and head of bone, removing eburnated bone down to good bone. (Lower Row)—(d)—Reaming out neck and head under great trochanter. (e) Graft removed from tibia. (f) Bone pegs being pressed in through neck into head, showing correct apposition of fragments.

these plates reflects upon the man and not upon the method. None of us consider for a moment, operating upon a fracture if we can secure a result without operation. Mr. Lane I believe, puts his plates in immediately after the fracture, but there are very few men, whom I have seen operate, who possess his skill and are able to carry out the details of his wonderful technique. Foreign bodies were never intended for handling non-unions.

*Foreign bodies should never be inserted in compound fractures.* I firmly believe that the number of foreign bodies, that have healed in compound fractures, can be counted on the fingers of one hand, leaving the thumb and one or two fingers off. *Foreign bodies should never be used in the presence of an infection.* If an infection is present in a fracture, one should wait for at least six months after healing has taken place, before resorting to any operative interference.

In the treatment of simple fractures, in which you are not able to secure a proper result, if you will wait ten days or two weeks before operating,

you can go in with perfect safety and apply the Lane plate for the reason that the tissues in and about the bones are walled off and cofferdamed and nature has put up this barrier against infection.

We hear a great deal about the removal of Lane plates, but when they have been put in properly, as a rule, they do not have to be removed.

*Fifth—Infection.* Infection sometimes gives non-union. Usually it causes only a delayed union. Cases of infective osteomyelitis, following a fracture and especially those which result in a pathologic fracture due to infection, eventually heal and union is established without a transplantation of bone. If after a fracture, an infection occurs and a discharge keeps up, one should look for a sequestrum or sequestri. The dead bone should be removed, granulation tissue thoroughly cleaned out as well as the sinuses curetted down to good bone. These cases as a rule, get a good solid union without any operative interference except that which I have just men-





No. 9. (Left) Fracture of upper third of femur. One inch shortening before operation. (Right) The same after operation, 14 days later. Perfect alignment with Lane Plate.



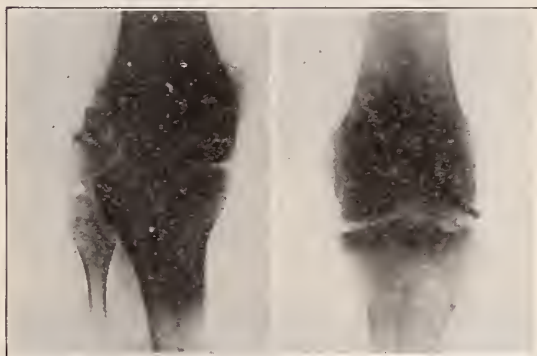
No. 11. Shows condition, resulting from misapplication elsewhere of a Lane Plate in a compound fracture. Angulation, infection, sequestrum, sinus and deformity.



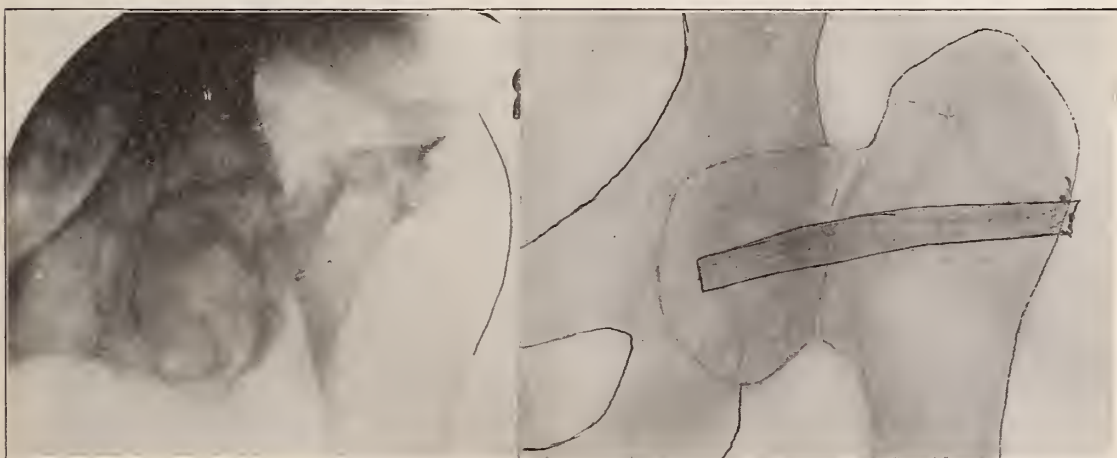
No. 12. Shows fractured femur. Lane Plate improperly applied elsewhere while an infection was present, resulting in infective osteo-myelitis, disability and deformity.



No. 10. (Left) Fracture at lower third of femur. Fibrous non-union three months after injury, with  $2\frac{3}{4}$  inches shortening. (Right) Ends of bone amputated. Lane Plate applied. Perfect anatomic and functional result.



No. 13. (Left) Fracture of external condyle of femur, flail-joint. Before operation. (Right) After operation. Showing extra articular nail approximating fragments of femur.



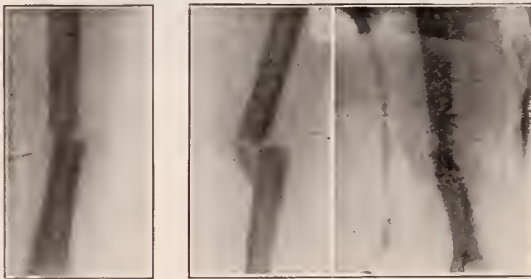
No. 14. Fracture of neck of femur in female, aged 72. (Left) Before operation, non-union of four years' duration. (Right) After operation. Perfect union.



No. 15. (From left to right) Fracture external condyle of humerus, with inability to flex and extend arm, before operation. Extra articular nailing of fracture external condyle three weeks after accident. Anatomic and functional result perfect. Anteroposterior view of same case.



No. 16. (Right) Oblique fracture of upper thirds of humerus before operation. (Left) The same two weeks after operation, showing apposition of fragments with Lane Plate.



No. 17. Non-union of middle thirds of humerus in male aged 65. Duration two years. Interosseous transplant of bone with nails. Perfect functional result.



No. 18. (Left) Oblique fracture lower thirds of tibia and fibula before operation. (Right) Two weeks after fracture. Application of Lane Plate. Perfect anatomic and functional results.

tioned. If a foreign body has been misapplied, in this class of cases, that is in the treatment of a compound or an infected fracture, the discharge will keep up, until the foreign body is removed. The foreign body acts just as a sequestrum does. During the process of healing, we usually administer autogenous vaccines and use Carrel-Dakin solution locally.

#### CONSTITUTIONAL DISEASES

*Sixth.*—General constitutional diseases in the experience of some men have seemed to play a role in non-union. Among the diseases given are:

- (a) Diabetes
- (b) Syphilis, and
- (c) Tuberculosis.

*Seven.*—There is a small class of cases, the exact etiology of which is unknown and which may not unite under any condition.

#### FREQUENCY OF NON-UNION

- First.*—Most frequent in simple fractures.
- Second.*—Compound fracture without infection.
- Third.*—Compound fracture with infection.
- Fourth.*—Pathologic fractures.

#### LOCATION

Our most frequent location of non-union has been:

- First.*—Lower Third of Radius and the Lower Third of Radius and Ulna.
- Second.*—Neck of Femur.
- Third.*—Lower Thirds of Tibia and Lower Thirds of Tibia and Fibula.
- Fourth.*—Juncture of Upper and Middle Thirds of Humerus.
- Fifth.*—Upper Third of Ulna.
- Sixth.*—Middle of Femur.
- Seventh.*—We occasionally see delayed union and non-union at:

- (a) Condyles of Femur.
- (b) Malleoli of Tibia and Fibula.
- (c) Condyles of Humerus.
- (d) Neck of Humerus, and
- (e) Patella.

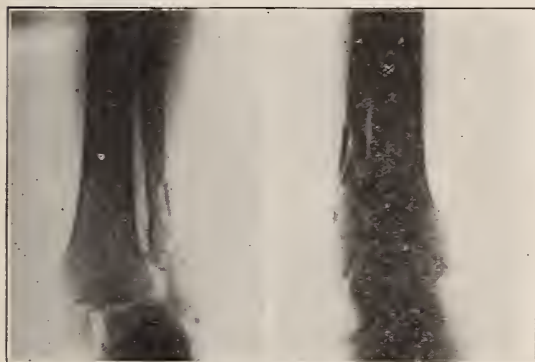
Then union is fibrous. While I realize that perhaps every operator's experience varies, I am





No. 19. (Left) Non-union of tibia and fibula, middle thirds of leg. Duration 22 months. (Right) Double interosseous transplant with nails, after operation.

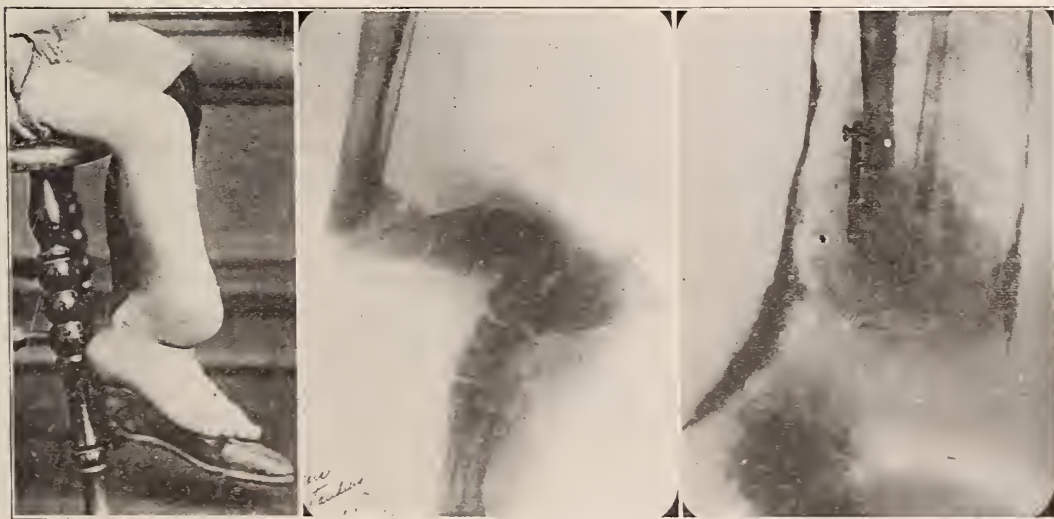
No. 20. (Left) Non-union of tibia and fibula, lower thirds of leg. Not the slightest effort on the part of nature to throw out a callus. Sixteen months before operation. (Right) Interosseous transplant after operation.



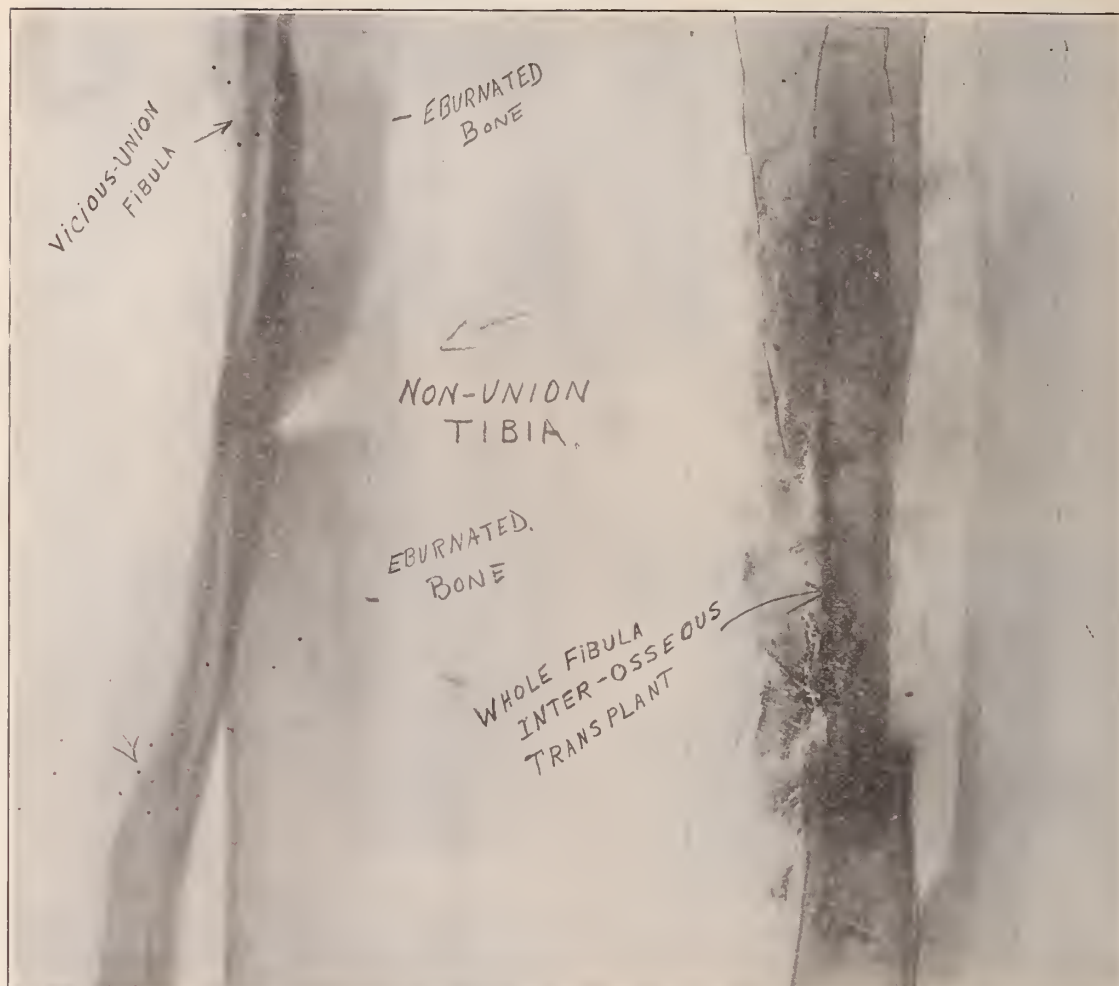
No. 21. (Left) Potts Fracture before operation. (Right) Compound comminuted Potts Fracture after operation. Absorbable suture.



No. 22. (Left) Ancient Potts Fracture, duration six months, showing fractured fibula and fractured internal malleolus with eversion of foot. (Right) Extra-articular nailing of internal malleolus callus, wiring of fibula after re-fracture. Correct anatomic confirmation, and functional result perfect.



No. 23. (Left) Photograph of angulated fracture of tibia and fibula, lower thirds of leg. (Center) X-ray picture showing angulation of lower fragment and deformity. (Right) Same case four days after operation. Application of Lane Plate.



No. 24. Non-union of tibia with vicious union of fibula. Duration three years, nine months. Patient had been operated six times. (Left) Before operation. (Right) After operation, interosseous transplantation using fibula.

giving you what my experience has been in this class of cases.

#### TREATMENT

How shall we prevent the great number of non-unions that we see?

*First.*—Do not too completely immobilize an extremity after a fracture, either with plaster or splints.

*Second.*—After a fracture, do not be afraid to get your patient up, and see that there is some mechanical irritation so that osteo-genesis will be stimulated.

*Third.*—Medically, I believe that the use of thyroid extract and in some cases mercury and calcium, seems to stimulate the production of a callous.

#### OPERATIVE TREATMENT OF NON-UNION

Do not be in a hurry to operate for a delayed union until you have had your patient up and around and have tried in every conceivable way

to stimulate osteo-genesis. Remember that there is such a thing as a delayed union and not a non-union in certain cases. After sufficient time has elapsed and you are satisfied from the local examination, confirmed by the X-ray, that this is a true case of non-union, then most careful attention must be paid to the detailed work of bone operation, namely to *asepsis* and *technique*. An incision is never made over the bone, but to the side of the bone. The connective tissue is removed from the distal and proximal fragments down to good bone; eburnated bone is removed by Gigli saw, bone forceps or chisel down to normal bone. A wide separation of the periosteum seems to stimulate osteo-genesis. The medulla is next reamed out, and an interosseous transplantation is made. The interosseous transplantation has an enlargement in its center or is made in the shape of a cross, which will prevent it from slipping and any shortening can thus be nicely taken care of. Muscles are not cut as a rule but are separated. The fascia and skin are closed and the incision sealed with collodion.



## POST-OPERATIVE CARE

The type operation that we have been using, has been the interosseous transplantation and not the inlay method. One would no more think of an approximation of the ends of the bone without the removal of all of the fibrous connective tissue and the eburnated bone, than they would of a nerve suture without the removal of the neuroma. We do not disturb our incisions for at least three weeks, unless a haematoma develops and then this is aspirated and the wound again sealed. Casts or leather lacings are worn for a period of at least six months, during which time careful attention is paid to any of the joints that may be involved so that there will be no limitation of motion, capsule infiltration or ankylosis. A superlative degree of immobilization is absolutely necessary after bone transplantation.

We are not going in to details concerning the microscopic or gross pathology, nor are we going to bore you with an academic discussion of the various factors in bone transplantation and the different roles the periosteum, compact bone, medulla or the bone graft play. We do know that autogenous bone transplantation does as a rule give a result in this class of cases.

## REASONS FOR FAILURE

- First.*—Too small a transplant.  
*Second.*—Not sufficient immobilization.  
*Third.*—Infection, causing a sequestrum of transplant.

## CONCLUSIONS

1. Autogenous bone transplantation is the correct treatment for non-union.
2. We prefer the interosseous type of operation.
3. The bone transplant must be of sufficient size to fit accurately.
4. Complete immobilization by proper fixation for a period of at least six months.
5. A most careful attention to the details of asepsis and technique in operating as well as proper after care.
6. There is no age limit at which operation may not be successfully performed.

One of the sequelae that may follow a bone transplantation for non-union is a fracture of the bone transplant. In our series of cases this has occurred four times. The treatment, if apposition is good, is a complete immobilization with a plaster of Paris cast for a period of about three months. The result in the four cases that had a fracture, was complete bony union with a perfect functional result at the end of this time.

I wish to emphasize again that foreign bodies are not to be used in the treatment of non-union and that the interosseous autogenous bone transplantation is a safer, saner and much more indicated procedure in the correct treatment of this condition.

368 E. BROAD STREET.

## NEW BOOKS

*Maternitas.* A book concerning the care of the prospective mother and her child. By Charles E. Paddock, M. D., Professor of Obstetrics, Chicago Post-graduate Medical School; Assistant Clinical Professor of Obstetrics, Rush Medical College; Attending Obstetrician, St. Luke's Hospital. Cloyd J. Head & Company, The Year Book Publishers, Chicago. Price \$1.75.

*Refraction and Motility of the Eyes* with chapters on color blindness and the field of vision. Designed for students and practitioners, by Ellice M. Alger, M. D., F. A. C. S., Professor of Ophthalmology at the New York Post-Graduate Medical School, etc. One hundred and twenty-five illustrations. Second revised edition. F. A. Davis Company, Publishers, Philadelphia, Pa. Price \$2.50 net.

*Personal and Community Health*, by Louis Lehrfeld, A.M., M.D., agent for the prevention of disease, Department of Public Health, Philadelphia, with introduction by Wilmer Krusen, M.D., LL.D. Director (1916-1919) Department of Public Health and Charities, Philadelphia. F. A. Davis Company, Publishers, Philadelphia, Pa. Price \$2.00 net.

*Bacteriology for Nurses*, by Harry W. Carey, A.B., M.D., Assistant Bacteriologist, Bender Hygienic Laboratory, Albany, N. Y. (1901-3); Pathologist to the Samaritan, Troy and Cohoes Hospitals, and City Bacteriologist, Troy, New York. Second revised edition, F. A. Davis Company, Publishers, Philadelphia, Pa. Price \$1.25 net.

*The Story of the American Red Cross in Italy*, by Charles M. Bakewell. The purpose of this book is not to give a detailed statistical account of Red Cross activities in Italy—that may be found in the various Department Reports—but rather to tell the American people who contributed so generously to the Red Cross funds the simple tale of what their dollars did in Italy. The Macmillan Company, Publishers, New York. Price \$2.00.

*Syphilis*, A treatise on Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis, and Treatment, by Henry H. Hazen, A. B., M. D., Professor of Dermatology and Syphilology, Medical Department of Georgetown University; Professor of Dermatology and Syphilology, Medical Department of Howard University; with 160 illustrations including 16 figures in colors. C. V. Mosby Company, St. Louis. Price \$6.00.

*Hygiene, Dental and General*, by Clair Elsmere Turner, Assistant Professor of Biology and Public Health in the Massachusetts Institute of Technology; Assistant Professor of Hygiene in the Tufts Medical and Dental Schools. With chapters on Dental Hygiene and Oral Prophylaxis, by William Rice, Dean, Tufts College Dental School. The C. V. Mosby Company, 801 Metropolitan Building, St. Louis, Publishers. Price \$4.00.

## Some Principles in the Retentive Treatment of Fractures\*

R. H. McKay, M. D., F. A. C. S., Akron

**Editor's Note.**—In handling the problems involved in the retentive treatment of fractures, Dr. McKay is accustomed to immediately determine the type, to analyse the muscle pulls as they are affecting either fragment and then to decide the position, the forces necessary to be applied and the retentive apparatus or the operative measure most advisable. As a fracture is as well adjusted on the seventh as on the first day there is ample time and opportunity for a careful study of each case and its individual requirements. Adjustments of the fragments and application of any retentive apparatus is best done under relaxing anesthesia. In securing proper retention it is always necessary to obtain fixation of both joints at either end of the shaft. After describing the various types of retentive apparatus and operative fixation, Dr. McKay pleaded in conclusion for a greater study and practice of the science and art of bone setting, a reduction in unnecessary operative procedures and the use of the highest type of bone surgery when interference is imperative.

IT is my desire to bring to your attention some thoughts concerning certain principles in the retentive treatment of fractures which have failed to impress many of us in a didactic manner and of which many of us have failed to make practical use.

### FACTORS INTERFERING WITH GOOD RESULTS

Fractures seldom receive attention except in a certain single phase, or else in considerations bearing principally upon some or many of their complications. These things, as a rule, are of little value to the general practitioner, and, of only passing interest to the surgeon. We realize that every important fracture is pregnant with clinical possibilities. So that I am devoting this short period almost entirely to practical points concerned in securing good fracture results.

As a basis, I am going to first consider the factors that ordinarily interfere with these attainments, and secondly the practical points, in the modern methods, in securing the same. For practical purposes we are classifying this first group into six subheadings:

**First:—Simple or Compound.** The most serious inconvenience of compound fractures is infection, localized trauma and loss of bone tissue. The infection always requires drainage provisions, altered methods of retention and, often requires one to postpone reduction as the last effort.

Infection and trauma frequently induce sepsis, gangrene, and temporary or permanent paralysis. Loss of bone induces various types of deformity, and elicits questions of osteogenesis, operative maintenance and the better methods.

**Second:—Type.** Very often it is difficult to make a type diagnosis without the X-ray. These instruments today are convenient, forcing the definite conclusion that such diagnosis should be made prior to active treatment. *Transverse fractures* present little difficulty because they are most common in the mid-shaft, and, physical forces evenly opposed are easily controlled. The *spiral fracture* requires the best apposition to

avoid shortening, large callus and deformity. The *oblique fracture* is difficult in direct ratio to the degree of obliquity—the more nearly transverse the less the difficulty of reduction. The corraling of the fragments into fair relation is the problem of comminution. However one must wonder at nature's ability in fusing these attached or unattached fragments into a component mass of callus.

**Third:—Intra-Articular Fractures.** The simple fracture with one end into the joint presents no added difficulty, as the absorption of the extravasated blood is usually prompt. But joint comminution frequently induces a condition requiring operative procedures, as when the radial capitellum is left free or *impinged*, one only escapes trouble by its removal.

**Fourth:—Soft Tissue Interposition.** To my mind this is of least importance. It may by interrupting callus continuity interfere with union, but frankly, I doubt it. Certainly, however, it has no bearing on reduction of deformity or maintaining position.

**Fifth:—Impaction.** This is commonly seen in joint regions, it forces and maintains its deformity, requiring one's best judgment to determine whether to destroy it or be happy with its presence. It often induces deformity, attaining fair function. Impaction is frequently a most fortunate occurrence in the femoral neck of the aged.

**Sixth:—Muscle Pull or Tension.** Here, I feel, rests the foundation of successful fracture treatment; every muscle, except sphincters, possesses its opponent, therefore we must always take into account the forces required to neutralize natural muscle pulls. If unneutralized it matters little, what efforts, devices, or operations are employed, the end results are shortening, angulation and every conceivable deformity.

### RETENTIVE TREATMENT, GENERAL CONSIDERATIONS

There are many phases of treatment which are not germane to this essay, and, I desire to adhere strictly to the retentive treatment of the broken bone, as nearly as possible. Therefore, I immediately determine the type, attempt to analyse the muscle pulls as they are affecting either fragment and then decide, the position, the

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.



*forces necessary to be applied, and the retentive apparatus or the operative measure most advisable.*

Oftimes, by mere position, one is able to neutralize the muscle forces, and replace and maintain fragments. This is seen in the very common fracture of childhood, namely oblique fracture of the lower end of the humerus involving the condyles, in which extreme flexion reduces deformity and maintains position. This typifies the principle and impresses the important fact that to intelligently treat a broken bone one must first determine the type and secondly appreciate the position or steps necessary to neutralize these disturbed forces. So by position alone, or in conjunction with an opposing applied force we are able to retain the fragments. For example, a similar fracture three inches higher will receive brachialis anterior flexion deformity, plus the shortening influence of the biceps and triceps; so again the same position obtains plus extension equal to the disturbing force.

*It is known that a fracture is as well adjusted on the seventh as on the first day, thus affording ample opportunity for its careful study. One must consider every fracture a different fracture with its individual environment and forces requiring individual treatment.*

*After these considerations we anesthetize the patient, excepting simple cases, to a point of relaxation that we may have free opportunity to adjust the fragments, and maintain the position, whatever it may be, while applying retentive apparatus. In securing this retention it is necessary to obtain fixation of both joints at either end of the shaft. Failing in this essential detail, we immediately defeat our purpose, because such failure precludes the fixation of fragments. Fixation should not be routine but habitual.*

#### METHODS OF FIXATION

Fixation is secured by means of splints made of wood, metal or plaster, cleverly applied by padding, moulding or attached slings of cloths, as exemplified in the famous Thomas splint. Certain types of fractures have developed approved stock splints as the result of fairly constant conditions, as in a Colles fracture. Metal, except aluminum splints, have been discounted by the X-ray for obvious reasons. The old box splint is seldom seen, having been almost supplanted. However, in many fractures of the leg the box splint is very useful, especially in the presence of compound conditions and traction. The most practical splint is found in plaster. It is ever at our command.

Plaster bandages should be infiltrated with White's dental plaster and should be saturated with plain warm water. These conditions make it possible to mould and shape any desired splint deliberately and without heat development.

They are made by two methods, one by making a plaster slab, properly cut for angles, and

moulding it to contour, while it sets; the other by applying an ordinary cast, then with a Stilles Shears bivalving the cast. The casts made of sol. of soda silicate have been very valuable in cases of delayed union. They are applied by painting each layer of gauze bandage with sol. of soda silicate. They require many hours for setting but are light and very agreeable to ambulatory cases. Glass casts used for this purpose will reduce the number of delayed and non-union fractures.

The *Thomas splint*, the possibilities of which were particularly developed in the late war, is a practical simple method of fixation. It was the best army splint because, of its universal application, and the ease of handling and transporting the patient. It consists of a well padded collar with a long narrow loop of  $\frac{1}{4}$  inch steel. The lengths were uniform. The fact that the steel rods sprang from the middle of the collar and that the collar was on the bias made them either right or left. It has a cleverly arranged foot rest to retain the foot in position, also a detachable bracket to support, fix and elevate the foot from the bed. The collar fits the crotch and axilla comfortably. They may be angulated to suit any occasion. Its extension virtues will be mentioned later. The supporting factor is supplied by applying heavy muslin or canvas either in stripes or one piece, held to the frame with safety pins or large paper clips, making it possible to adjust any section. Over all, the limb may or may not be bandaged depending upon the occasion.

#### MUSCLE NEUTRALIZATION

Muscle neutralization with fixation is accomplished by one of three methods either—

1. Casting under extension.
2. Weights applied by cord and pulley (Bucks extension.)
3. Thomas splint.

To my mind, the most satisfactory method is casting. To maintain position by cast, it must be applied properly, with counter pressure points considered, showing due regard for circulation and comfort. It must be applied, under anaesthesia and with relaxation. The bony prominences should be well padded with saddle's felt, in order that, at these points moulding can be done that will accomplish counter extension, and at the same time give perfect freedom to the important vessels in the neighborhood.

Sections requiring additional strength may be reinforced by incorporating any shaped plaster slabs or wooden or metal strips. By clever application one may anticipate or permit windows for treatments.

In multiple fractures of the lower limb, by the use of Hawley table and rapid setting plaster one may cast the leg, apply traction through this cast to set the femur, then apply the body spica making the cast splice. In compound fractures re-

quiring open treatment a sectional cast is the most practical method. The proximal limb and joint are casted, then, the distal joint. By the use of plaster knobs the two are connected by plaster ropes, steel rods or steel rod jacks. Two of these rods should be lateral so that the uncased limb may be supported by toweling as in the Thomas splint.

The weights and pulleys or Buck's extension has always given satisfaction; it is simple to apply and needs little comment. We have always applied it through adhesive plaster, believing it to be as effective and more surgical than through tongs and other fads. It is applicable from the leg in the horizontal, from the knee in the double inclined plane, from the leg in the perpendicular through one of the many overhead frame works, (Balkan Frames).

The Thomas splint affords extension embodied in the unit so that one may apply extension during transportation. Adhesive straps are applied as in Bucks, then a cord from the strap to the end of the frame, a rod is inserted between the cords and twisted inducing any desired traction. By placing a pulley on the end of the frame it is apparent that Buck's extension may be applied with the Thomas Splint.

#### OPERATIVE FIXATION

Notwithstanding, there are fractures in which all methods of conservative treatment fail in maintaining apposition. As years have passed this apparent fact has led surgeons into several fields of endeavor, some have been merely fads of the individual, others have created decided steps in advancing bone surgery. All, with the human element of insisting upon the individual point being maintained, ever securing support from certain quarters, denying later progress.

There are four types of fractures requiring operative interference, namely:—

1. Fracture with loss of bone tissue.
2. Fractures near joints in which it is impossible to neutralize muscle pull.
3. Fractures with non-union.
4. Fractures with mal-union.

We hasten to remark that many operators would increase this list. There have been six general methods of operating. My remarks will be in their order of importance and best usage. I would reiterate that it matters little what material be used or what operation be performed if we fail to apply proper retention, the end results will be disappointing.

*First:—Metal.* The word implies a general statement meant to cover every condition wherein metal has been or may be used. We all realize that this substance has its firm adherents, that frequently some new suggestion is published for its advancement. I take issue as to the advisability of its use, yet grant it its normal credit. I admit it has been a stepping stone of such great importance that it is of historical interest.

*Second:—Ivory.* Its use is rare and deserves no discussion.

*Third:—Heterogenous Bone.* Occasionally a patient without relative and with an osseous system not providing sufficient cortex for our object, requires such grafting. The graft is prepared by boiling it twenty-four hours, placing it in ether several hours, then reboiling to remove all fatty elements; incorporating it in the defect at the operation. The results have been very satisfactory, none of the cases requiring secondary operation.

*Fourth:—Homogenous Bone.* As in all similar cases undoubtedly this is better than bone of the heterogenous type, blood relative being better than a non-relative. Its application is seen in childhood.

*Fifth:—Autogenous Bone.* Naturally one's choice is to use the patient's own bone and as a rule it is possible to do so. The graft used may be the Albee inlay or the dowel. The Albee inlay graft is secured from one of the fragments, and slid into the vacancy or lesser length in the other fragment. This is then held secure by the use of catgut or kangaroo tendon. There are several methods of tying, all possessing virtue in a given case. The direction of the inlay should oppose the main direction of deformity. The dowel or peg has a much wider range of usefulness as the inlay is particularly applicable to shaft fractures while the dowel may be used in shaft or head from either one or the other, it may transfix the oblique fragments, or may be used as an inter medullary peg. In joint fractures, the dowel attains its greatest possibilities.

The happiest result I have seen, was in a patient who had an irregular oblique fracture through the lower epiphyseal line of the femur with backward displacement and firm impaction. Through lateral incisions we destroyed the impaction returning the condyles to normal position. An autogenous graft from the right tibia supplied the dowels, one being milled to  $\frac{1}{4}$  and the other to  $\frac{3}{8}$  inch. The smaller was fitted from the shaft to the internal condyle; the larger from external condyle to the shaft. The limb was placed in a plaster cast, bivalved on the 14th day, when passive motion was begun. The ultimate result is no shortening or other deformity and normal function.

In certain femoral neck fractures in middle aged patients the Albee bone peg is the operation of choice. It is another application of the dowel principle and has come to stay. Yet one must consider in each of these cases the advisability of the Whitman cast. This, by position, forces apposition and retention and certainly has been very wonderful in its results.

*Sixth:—Kangaroo Tendon With or Without Clamps.* The simpler the means and method in operative work the better. We use kangaroo tendon whenever possible. We never use wire. Kangaroo tendon is absorbable in about eighty



days; it is more flexible; it has many times the tensile strength; it does not induce bone atrophy, and it does not require two anaesthesias and two operations. We have found it particularly useful in tibial oblique fractures, as well as in fractures of the clavicles, and patellae. We operate patellar fractures during the first five days. We place two to three kangaroo tendon ligatures through the patellae and repair the capsular ligament with No. 3 catgut. We begin passive motion about the fourteenth day. The

os patellae, a sesamoid, being composed almost entirely of cancellous bone, effects a union readily.

#### CONCLUSION

In conclusion, my plea is, a greater study and practice of the art of bone setting; a reduction in unnecessary operations on bone and if you must operate, to do so by methods that permit you to practice the highest type of bone surgery in all its art and science.

## The History of the Development of Industrial Medicine\*

Eli A. Miller, M. D., Cincinnati

Director, Industrial Emergency Hospital

**Editor's Note.**—As an introduction to a series of papers on industrial medicine and surgery in this issue, we are printing Dr. Miller's interesting account of the historical evolution of this phase of practice. It is a striking development of the modern industrial system to realize that as a result of the combined efforts of individuals, a number of organizations and employers as well as various state and federal agencies that some 8,000,000 of the workers of the nation are now receiving, to a more or less extent, the benefits of industrial medicine and surgery, as it is now conceived and implanted in our economic structure. It may eventually come to pass that industrial medicine and surgery will be conducive to that closer relationship between capital and labor which is to cure the present tendency to labor unrest in this country and abroad.

**I**N the course of time industry, so important a factor in the life of man, has developed hand in hand with civilization.

#### PREHISTORIC PEOPLES

Little is known of the prehistoric inhabitants of the Stone and Bronze Age for they have left no records inscribed on stone or parchment. The existence and character of these peoples can only be inferred from fragments of the weapons, ornaments and household utensils found among the ruins of their dwellings.<sup>1</sup>

#### ANCIENT EGYPT

The earliest history of Egypt is involved in obscurity. What is known is derived from historical writings of Ancient Greek historians and Egyptian priests and in modern times from the deciphering of inscriptions on Egyptian monuments and of records on rolls of papyrus found in the tombs.<sup>2</sup>

A large amount of unemployed labor and the suspension of various industrial activities caused by the yearly overflow of the Nile allowed the kings large opportunities to employ the labor of the people in the building of monuments and tombs which stand to this day.<sup>3</sup>

The Egyptians had attained a high degree of civilization. This is evident from the inscriptions on the walls of the interior of these pyramids where every condition of human life is found represented. The oppression of the agricultural laborer by the government through extortionate taxation forced the peasants through poverty to seek work under the more fortunate

landowners who treated them no better. Scant wages and insufficient food brought them to a condition which was regarded with contempt not alone by the privileged classes but also by their slaves.<sup>4</sup>

The account of the Exodus of the Israelites gives an excellent insight into the oppression suffered by the laboring classes of Egypt. They were set to work at building and digging and toiling in the brickyards and were beaten by their foremen or taskmasters.<sup>5</sup>

These heavy tasks led to frequent revolts, a number of which are mentioned in ancient history.

In Greece and Rome, as in Egypt, work was carried on by free-workers and later it was given over to slaves.<sup>6</sup>

"In the days of Homer, work was considered not only necessary but honorable."

While the custom of slavery probably arose from the practice of taking prisoners in ancient military expeditions, in later times, it appears in nine cases out of ten, to have been the result of poverty, which under the ancient economic system was but a short step to slavery. The slaves, in the period represented by the Old Testament, enjoyed a position and rights which were far superior to those in Rome or in modern times. Their lot was very similar to that of trusted family servants of today. The laws of Babylonia and of Israel, embodying the institution of slavery, endeavored to ameliorate its harshness, and are characterized by their spirit of justice and consideration for the rights of the less fortunate among them, whether they be slaves or hired servant, aliens or citizens.<sup>7</sup>

"Thou shalt not oppress a hired servant who is

\*Read before the Association of Industrial Physicians of Cincinnati, April, 1920.

poor and needy, whether he be one of thy fellow countrymen or one of thy resident aliens who is in thy land within thy gates. On the same day shalt thou pay him his wages before the sun goeth down; for he is poor and setteth his heart upon it, and let him not cry against thee to Jehovah and thou be guilty of a crime."

#### INDUSTRIAL MEDICINE IN ANCIENT TIMES

The earliest records of observations made on the effects of occupations and trades on the health of workers are those of Hippocrates and Galen, which give an account of the diseases peculiar to miners and burden carriers, gardeners and riders.<sup>10</sup> Aristotle writes of the diseases of "runners" and prescribed a certain diet for gladiators. Pliny reports the hazards of workers with sulphur and zinc."

Further than this the study of the effect of the trades on the health of workers was neglected for the reason that the lives of the slaves were considered of no serious moment.

#### THE GUILD SYSTEM OF MEDIAEVAL TIMES

With the passing of the ancient civilization a marked change in the industrial scheme took place.

With slave conditions gradually disappearing there appeared a new order in the formation of guilds by those engaged in domestic and handicraft production.

The weavers and fullers of cloths were the first to organize themselves and their example was followed soon after by other classes of wage workers.

Those who belonged to them must have enjoyed special privileges as these organizations were interested in politics and took part in the local elections.<sup>10</sup>

The guild assumed responsibility for the quantity and quality of production. This was possible because each of these organizations was never very large and trade was limited to the city or group of cities.

With the demand for increased production following the improvements of the means of communication and the great discoveries of the Fifteenth Century, the power of the guilds declined.

Some of the workers and merchants, who had accumulated their earnings, then became the capitalists. They bought raw materials and distributed them to other workers in the rural districts and in the cities. As the work was completed they collected and sold the product to the consumer or to other merchants.

This method of manufacture predominated in general until the Eighteenth Century and became the forerunner of the modern factory system.

In the history of the Sixteenth Century there are records of woolen cloth and linen factories, dye establishments, hat and soap factories and sugar refineries, both in England and Germany.<sup>11</sup>

#### UNSANITARY CONDITIONS

The workshops in the Mediaeval Period were as a rule small and dark and served also as sales-rooms. The door opened on the narrow streets, the floor was of earth and the windows made of oiled paper. Domestic animals could come and go as they pleased. In rainy weather mud and filth were tracked in from the streets into the workshops.

The general custom, that of emptying all refuse and sewage into the streets was responsible for the general unsanitary conditions prevailing in the shop districts.

#### INDUSTRIAL MEDICINE

It is quite natural in such a civilization that the study of the influence of working conditions on the health of the producers was overlooked.

"There are, however, records left of the awakening of some physicians and scientists to the importance of health and sanitation during the latter part of the Middle Ages. \* \* \* We occasionally come across references to the effects of coal and lead mining, the manufacture of mirrors and the detrimental influences of dust."<sup>12</sup>

To Prof. Bernardo Rammazini of the University of Padua, Italy, belongs the title of the "Father of Industrial Hygiene." In 1700 he had written and published a book "De Morbis Artificum Diatriba", consisting of 50 chapters. This is the first comprehensive account of the processes of a great number of industries, the activities of the workers, the workplace itself and the influence all this bears on the health of the employees.

This work gave the first impetus to the study of the influences of industrial activity and diseases of occupations. It was translated into many languages and used throughout the world and not until a century and a half later was this work of Rammazini surpassed.

#### THE MODERN FACTORY SYSTEM

The modern factory system probably started in the Eighteenth Century. Previous to this time industrial production was carried on on a small scale and no great increase was possible until the advent of new inventions and discoveries.

In the early part of the Nineteenth Century, with the substitution of steam for water power in the mechanical and manufacturing industries a tremendous rise in production occurred. All this was associated with an unusual demand for labor, especially apprentices, women and children, as it required much less skill, or none at all, to feed the machines.

There followed a general migration of the rural populace to industrial centers. Competition among the workers increased and finally became so great that wages fell to a minimum.

Factories were hurriedly put up in old buildings and ramshackle structures with no provision for the convenience and comfort of the workmen.



Competition between manufacturers to undersell each other in gaining a market for their products forced the employers of labor to economize in every direction. They could not save by the use of inferior machinery, nor in the quality of the raw materials, and so, labor being plentiful, they economized at the expense of the workers.<sup>13</sup>

Workmen began to believe their lot in life was made much worse by the advent of "Steam and Speed," and spoke of their condition as not much better than the slaves of ancient times. They referred to their factories and workshops as "slaughter houses."<sup>14</sup>

As time passed the grave importance of occupational diseases and accidents made itself apparent in countries like England, France, Germany, and Italy, in the realization that a too high death rate was chargeable upon many of the industries.<sup>14</sup>

*First National Effort to Prevent and Mitigate Injurious Effects of Occupational Diseases, England, 1802.*—"Public sentiment demanded that an effort to protect in so far as is possible those elements in the organic life of the nation, that were the victims of this new era in industry. Toward this end a study of the so-called dangerous trades was undertaken to determine the causes of the dangers, and the possible means for their prevention and mitigation. Laws were passed in England (1802) for the protection of health and morals of apprentices and others employed in cotton and other mills and factories, which limited the hours of work to 12 hours a day and made provision for general cleanliness and also for periodical inspections by a justice of the peace and a clergyman."<sup>14</sup>

*First Industrial Commission and Results, (1833).*—In 1816 and 1833 a Commission was appointed to inquire into conditions of factories with the following results:

1. Placing of age limit on child labor.
2. Appointment of four regular factory inspectors; and
3. Enactment of special rules for white-lead industry, bake houses and other industries.

Ten years later employment of children under eight years in factories was forbidden, and female labor was restricted. Also a limitation was placed on hours of labor to ten hours for women and children.<sup>14</sup>

*Classifying Dangerous Trades.*—In 1864 machinery guards were required and certain occupations were declared dangerous. Recognizing the effects of dusty trades on health, appliances for the effective removal of dust from the air were required.<sup>14</sup>

*Sanitary Authorities Supervise Workshops.*—In the present day, even, we have side by side with modern factories small shops in which manufacturing is carried on under similar conditions which existed centuries ago. The laws appertaining to factories were, at first, very

broad so that the small workshops were not included in their scope. In 1891 this condition was corrected by the broadening of the definition of the term "factory" by new legislation, which also placed the supervision of the sanitary conditions of the workshop in charge of the local sanitary authorities. Six years later the Workmen's Compensation Act was passed. This was amended in 1900 and in 1906.

In 1901 medical officers of health were given increased powers and duties.

*Other Countries followed England's Lead.*—France followed England's lead beginning in 1810, and subsequently Prussia, Bavaria and other German states.<sup>14</sup>

*Individual Contributions to the Literature of Industrial Medicine and Hygiene.*—In 1822, a century and a half after the publication of Ramazzini's great work, C. Turner Thackrah, of Leeds, wrote a monograph on the "Effects of the Arts, Trade and Professions and of Civic States and Habits of Living on Health and Longevity." In the same year, Patissier wrote his "Traite' des Maladies des Artisenens." Twenty-three years later Halford, of Germany, wrote an important work on the occupational diseases. Since that time many contributions on the causes, mortality, and the hygiene and prevention of occupational diseases have appeared. In 1897 German authors under the direction of Theodor Weyl issued a large volume, and English authors under Sir Thomas Oliver published a book on "Dangerous Trades; the Historical, Social and Legal Aspects of Industrial Occupations as Affecting Health." "These contributors were recognized experts on the various subjects and hence their conclusions carry great weight."<sup>15</sup>

Other pioneer workers are Thackrah, Halford, Arlidge, Eulenberg, Hirt, Patissier, Layet, Oldendorf, Roth, Albrecht, Sommerfeld, Dammer, and many others.<sup>15</sup>

The First International Congress on Occupational Diseases was held in 1906 at Milan, in which city was established the first hospital and clinic for the treatment, study and prevention of occupational diseases.<sup>16</sup>

In 1910 a laboratory was established in connection with the University on the Frankfort on the Main, for the development of Industrial Hygiene.<sup>16</sup>

These efforts of the national government, national associations and seats of learning and of individuals have been most helpful in the interest of the industrial group of civilization.<sup>16</sup>

*Progress of Industrial Hygiene in the United States.*—In this country, as in England, the mechanical industries had their origin in the textile industry.<sup>16</sup> The first factory in which perfected machinery was practically employed was started in Rhode Island in 1790.<sup>17</sup> In 1814 the first power loom was set up at Waltham, Mass. This is the first time in history that a factory was set up in which all the processes involved in

the manufacture of goods from the raw material to the finished product were carried on in one establishment.<sup>18</sup>

As in England, a tremendous rise in mechanical and manufacturing industries occurred and with it increased production, concentration of population and exploitation of child labor.<sup>19</sup>

*Factory Legislation.*—In 1836 the subject of child labor received attention in the State of Massachusetts, and an act was passed which provided for at least 3 months of schooling during the working year for every child employed under the age of fifteen.<sup>20</sup> Eight years later this was amended, providing for a minimum working day of 10 hours and limiting age of children employed to 14 years.<sup>21</sup> About the same time similar legislation was enacted in Connecticut and five years later in Maine, and not until after twenty years agitation did Pennsylvania awaken to the call by enacting similar legislation.<sup>21</sup> In 1852 Massachusetts was the first state to enact a law regarding safety of steam machines. This was followed in 1870 by an act requiring supervision of steam boilers, and in 1877 by an act requiring the removal of dust.<sup>21</sup> Then nearly all states began to enact some form of factory legislation. At present twenty-two states have provisions for the removal of dust and fifteen, including Ohio, require notification of certain occupational diseases, twelve against defective lighting, and eleven on the subject of temperature and humidity.<sup>21</sup>

Even Massachusetts, one of the first states to enact legislation favoring the health of the industrial population, failed to appreciate the importance of enforcing such laws. This is evident from the fact that not until 1888 did this state provide for a separate department of factory inspection, the duties having been performed previously to that time by truant officers and members of the police force.<sup>21</sup>

*First Exhibit in America Relating to Occupational Diseases.*—In 1905, Massachusetts, again leading the other states in matters affecting the public health, submitted through its Board of Health a brief report on "The Conditions Affecting the Health and Safety of Employees in Factories and other Establishments," which was supplemented in 1907 by a more exhaustive report illustrated. *This was the first work in America* relating to occupational diseases. Later contributors were: Drs. Kober, Frederick L. Hoffman, Alice Hamilton, Wm. C. Hausar, J. H. Lloyd, George M. Price, Graham Rogers, E. L. Edsall, E. E. Pratt, and E. R. Hayhurst.<sup>22</sup>

*Contributions by the United States Department of Labor.*—The efforts of the National Government through its Department of Labor to improve the hygienic conditions of the employees of its industries is shown by a large number of its contributions on the subject, a few of which are mentioned as follows:

"Essays on Employer and Employees."<sup>23</sup>

"The Sweat System."<sup>24</sup>

"The Inspection of Factories and Work Shops in the U. S."<sup>25</sup>

"The Production of Paper and Pulp."<sup>26</sup>

"Protection of Workmen in their Employment."<sup>27</sup>

Also numerous articles on foreign labor laws.<sup>28</sup>

"In June, 1910, the first national conference on Occupational Diseases was held at Chicago; . . . and it was estimated that 13,000,000 cases of sickness, involving an economic loss of nearly three-quarters of a billion dollars, occurred annually among the artisans and craftsmen of the U. S."<sup>29</sup>

In September, 1912, the Fifteenth International Congress of Hygiene held in Washington, D. C., displayed exhibits illustrating the dangers of numerous occupations. This and the National Association of Labor Legislation organized in 1908, and numerous other organizations gave a marked impetus to the study of the problems peculiar to Industrial Hygiene.<sup>30</sup>

In 1911 the American Museum of Safety was incorporated in New York and is devoted "to the safety, health, and welfare of industrial workers and the technique and science of industry." Later the National Safety Council was organized and soon after created a section of Industrial Hygiene which held its first session in connection with the Fourth Annual Congress of its parent organization at Philadelphia, Pa., in October, 1915.

In 1912 the U. S. Public Health Service created the Division of Industrial Hygiene with Dr. J. W. Schereschewsky in charge and three years later established a research laboratory in Pittsburgh, Pa.<sup>30</sup>

About the same time this Government assembled an excellent exhibit of safety devices in the National Museum in Washington, which has become a railway traveling exhibit and visits every important industrial city in the United States.<sup>30</sup>

The first clinic in this country exclusively devoted to occupational diseases was established in 1915, by Dr. S. S. Goldwater, Chief of the Department of Health of New York City.<sup>30</sup>

First among American physicians to appreciate the importance of occupational diseases from the medical, social and economic point of view was Dr. W. Gilman Thompson, who published in 1914 "The Occupational Diseases; Their Causes, Symptoms, Treatment and Prevention," the first text book of its kind in this country written by an individual.<sup>31</sup>

#### STIMULUS ADDED BY GREAT WORLD WAR

As this country entered the World War two most important problems were presented for solution: maximum production in the industries and conservation of man power.<sup>32</sup>

It soon became apparent that the principles of



Industrial Medicine and Surgery were essential in procuring maximum production.

The value of Industrial Surgery had already been proved, previous to our entering the war, in the reclamation and reconstruction of disabled men, by the application of the principles demonstrated as practical and sound in a few of our great industries.

The nation, finally awakened to its wasteful attitude toward disabled men, has at last adopted the creed of the disabled soldier: "Once more to be useful—to see pity in the eyes of my friends replaced with commendation—to work, produce, provide, and to feel that I have a place in the world seeking no favors and giving none—a Man among Men in spite of this physical handicap."<sup>32</sup>

The last ten years has placed Industrial Medicine and Surgery on a firm basis, as it embodies the best principles of preventive medicine and surgery, the best medical and surgical practice, combined with the best social and economic principles, all applied, approximately to 40,000,000 of the producers of this country.<sup>32</sup>

Heretofore many of our large industries have installed comprehensive medical services and have improved health conditions to a great extent. Others have had their surgeons under contract and usually underpaid them. These surgeons frequently and perforce considered this work a side issue as they were employed with the sole aim of repairing the harm that had already been done.<sup>32</sup>

Various laws have been responsible for many of such efforts but legislation in the main has been slow. No state has made a serious study of the problems of health protection among the workers.<sup>32</sup>

#### MEDICAL SUPERVISION OF HEALTH

A careful effort at medical supervision should aim to prevent disease and accidents among employes, give immediate and adequate care of the sick and injured, provide compensation and benefits during periods of disability and restore the disabled to an economic usefulness.<sup>32</sup>

One of the earliest examples recorded of supervision in this broad sense was that made by Dr. Frank Fulton in Providence, R. I., in 1906. He examined, free of charge, a number of workmen in a big saw factory for the purpose of discovering tuberculosis among them.<sup>32</sup> In 1909, Dr. H. E. Mock, introduced physical examination of the employes of Sears, Roebuck & Co., of Chicago, and reported the benefits of this procedure by the discovery of infectious diseases in their incipience, and the prevention of their dissemination among other workers.

A marked impetus in the advancement of Industrial Medicine and Surgery was given by this and similar reports issued about the same time by

Dr. Irving Clark, (Northern Grinding Co., Worcester, Mass.)

Dr. Otto P. Geier, (Cincinnati Milling Machine Co.)

Dr. Wilbur Post, (Peoples Gas Co., Chicago.)

Dr. C. G. Farnum, (Avery Co., Peoria, Ill.)

Dr. S. M. McCurdy, (Youngstown Sheet and Tube Co.)

Dr. D. B. Lowe, (Goodrich Rubber Co.)

Other valuable contributions in this field of work were studies of Dr. Thomas Crowder on ventilation, of Dr. Alice Hamilton on lead poisoning, of Dr. Schereschewsky and Dr. George M. Price on health conditions among garment workers; the efforts of Dr. E. R. Hayhurst of the Department of Industry and Labor of Ohio, and Dr. Francis Patterson of the Department of Industry and Labor of Pennsylvania.<sup>32</sup>

#### COURSES IN INDUSTRIAL MEDICINE AND HYGIENE

Recognizing the great opportunity for training the physician for work in this field, medical schools have in the last five years instituted courses which will make him a social and medical engineer as well as physician.

Industrial Medicine and Surgery in its broadest sense should embody all phases of the human maintenance service.

The problems confronting the industrial physician should properly cover the question of hours of labor and of wages, the relationship between employer and employe, the living and home conditions of the employes, the food, the recreation, as well as the general surroundings and the particular hazards of every member of the payroll.

The cure for the present labor unrest in this country and abroad can be found in the re-establishment of a closer relationship and a better understanding between employer and employe. A spirit of voluntary cooperation should exist in the industries.

What better service to the employe than that of Industrial Medicine and Surgery, in its broadest sense can bring about such a mutual interest and better understanding?

As a result of combined efforts of individuals, a number of organizations and employers and various state and federal agencies, approximately 8,000,000 of the workers of the nation are now receiving to a more or less degree the benefits of Industrial Medicine and Surgery as it is now conceived and implanted in the economic structure of our nation.<sup>32</sup>

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## The Importance and Scope of Modern Industrial Medicine\*

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Editor's Note.—Modern medical supervision for industrial workers, according to Dr. Shie, is one of the greatest single factors yet devised for the prevention of disease. According to Hayhurst over 50 per cent. of all deaths among occupied persons are preventable. This means that in the U. S. about a quarter of a million lives are capable of being saved every year by proper industrial medical supervision. Thus industrial medicine becomes a new arm of the health department and makes possible preventive medicine on a scale yet undreamed of. It contributes to the national health and welfare by attacking such problems as personal hygiene, bad housing and living conditions, as well as alcoholism and venereal disease. It secures for the community a reduction in the sickness and death rate and in the resultant economic loss. Its educational possibilities applied to the workers and their families are enormous. It secures for the employe manifold advantages and for the employer contented workers with increased efficiency and production.

*Industrial Medicine.*—"The theory and practice of medicine applied to the purpose of preventing and alleviating sickness and injury among industrial workers in order that they may enjoy the benefits of continuous productive employment."—Selby.

A NEW professional era has dawned and already the new specialty of Industrial Medicine and Surgery is well on its way, bidding fair to become one of the most important, if not the most important, fields in medical science. The war has made us realize more than ever before the many functions which the medical department of industries can and should perform.

### HISTORICAL CONSIDERATIONS

A few brief notes on the history and development of industrial medicine may prove interesting.

Occupational diseases were known to the ancients. Hippocrates and Galen recognized diseases peculiar to miners and bearers of burdens. As the factory system became firmly established during the nineteenth century, diseases of occupation began to multiply both in kind and in severity, and the attention of various investigators was directed to the causation and cure of these diseases. Thackrah, Patissier, Halford, Hirt, Oldendorff, Sommerfield, Oliver and many

others took up their study and with brilliant results. As industries became more developed, and as the various problems incident to their tremendous growth and variety became more numerous and apparent, more and more men became interested in them. In 1906 the First International Congress on Occupational Diseases was held in Milan, where just shortly before Professor L. Devoto had established the first hospital and clinic for occupational diseases. In spite of all this progress, however, until the last decade, industrial medicine practically limited itself to the mere treatment of injuries—emergency surgery—and to the treatment of a few occupational diseases. It was then that the researches of Andrews, Hamilton, Edsall, Pratt, Winslow, Kober, Hanson, Doehring, Graham-Rogers, Price, Hayhurst, Hoffman, Thompson, and others began to have their logical effects, and various states began to pass laws for the betterment of working conditions and for the safeguarding of the health of workers. Within the past ten years the great majority of the states have passed such laws.

In 1909 Dr. Harry E. Mock of Sears, Roebuck and Co. began, almost by accident, to make physical examinations of new employes. This work was soon taken up by Dr. Clark of the Norton Co., Dr. Geier of the Cincinnati Milling Machine Co., Dr. Post, and Dr. McCurdy, and later by Dr. Lowe and Dr. Elliott and a number of other industrial physicians. By 1914 physical examination of employes had become fairly common in a number of our larger and more progressive in-

\*This paper was awarded the Hamilton Fisk Biggar, Sr., prize of \$100 (1919) granted by the Cleveland Medical Library Association.



dustries. This marks one of the most important forward steps in industrial medicine, laying the foundation for what has now become the keynote of industrial practice—prevention.

In 1912 the Office of Field Investigation in Occupational Diseases of the United States Public Health Service was established, under the direction of Dr. Schereschewsky. Later on this office was broadened. It now is known as the Office of Industrial Hygiene and Medicine, and functions with a corps of physicians and engineers in the field of occupational health hazards. The personnel of this office, together with special investigators of the Department of Labor and the Bureau of Mines, have done much to open the eyes of both industry and the profession to the possibilities in industrial medicine.

#### RECENT ORGANIZATION

The first clinic in this country devoted exclusively to occupational diseases was established in 1915 by the New York City Department of Health. There are now several such clinics throughout the country, each doing good work in education, prevention and cure. In 1914 the Health Service Section of the National Safety Council was organized in such national societies as the American Public Health Association and the American Medical Association. In 1916 there was organized the American Association of Industrial Physicians and Surgeons, whose aim is "to foster the study and discussion of the problems peculiar to the practice of industrial medicine and surgery; to develop methods adapted to the conservation of health among workers in the industries; to promote a more general understanding of the purposes and results of the medical care of employees; and to unite into one organization members of the medical profession specializing in industrial medicine and surgery for their mutual advancement in the practice of their profession."

The work done by such organizations was accomplished slowly, but it progressed with increasing momentum. Industry on its own initiative began to take interest in the matter.

Among the pioneer industries in this movement were the National Cash Register Co., the Norton Grinding Co., the Cincinnati Milling Machine Co., Sears, Roebuck and Co. and the Ford Motor Co. Such industries began to realize that there was more to industrial medicine than the mere repair of injuries. They began to correlate various agencies in their plants so that efficiency might be increased and prevention could take a place of importance in their medical program equal to that of cure. Such a program included the following points: (1) Physical examination of all prospective employees, and re-examination of all physically defective employees to advise corrective measures. (2) Treatment of accidents. (3) Examination and advice in cases of sickness. (4) Control of plant sanitation and

(5) Promotion of health education among employees.

#### GROWTH DURING THE WAR

Regarded by many, in 1917, as still in the experimental stage and branded by others as visionary, idealistic and unpractical—this was the status of progressive industrial medicine when America entered the war. Immediately a great strain was thrown upon industry. The military need for greatly increased production had to be met, and at the same time it was necessary to offset in some way the drain on the man power in industry brought about by the raising of the military forces. New industries and new factory buildings sprung up almost over night. Thousands of men were put to work making explosives, dyes, and other new chemical products. The crying need for such products at first almost obscured the great danger arising from various new occupational diseases.

#### LABOR TURNOVER AND ABSENTEEISM

It was not long, however, before the large numbers of incapacitated workmen and the high rates of absenteeism and labor turnover compelled attention. On the other hand, older factories became so crowded with workmen that existing sanitary provisions in many cases became inadequate, and many of the new plants were constructed so hastily that sufficient care was not given to these important points. The same is true of ventilation, dust and fume removal, accident safeguards and a number of other factors which go to make good or bad working conditions. The lack of such facilities and provisions, together with the overcrowding that was often necessary both in the shops and in the factory barracks (the latter often unwisely resorted to because of inadequate housing facilities), combined to increase sickness, accidents, labor turnover and absenteeism—each contributing its share in making industry's problems more difficult.

In order to solve the occupational disease problem, special studies were made by officers of the United States Public Health Service, the Ordnance Department, and the Department of labor; and the cause, prevention, and cure of many of these diseases ascertained.

*Further analysis and study revealed the fact that what industry needed most to deal with the increased disease, accident, turnover and absentee rates was a well organized medical service able to undertake suitable prevention as well as cure.* It was then found that but relatively few plants possessed a medical service capable of coping with the variety of problems, presented. (These few plants were largely the ones which before the war had the progressive industrial, medical and surgical organizations. It became necessary therefore for the United States Public Health Service to organize suitable medical de-

partments in various plants, and in some large establishments the whole medical organization, together with all related activities, was taken over bodily by this service.

#### EFFICIENCY AND PRODUCTION

This new medical organization placed particular stress upon principle of prevention as well as cure, and one of its main features was the examination of all new employees. Necessary even before the war in any constructive scheme of medical service, it now became doubly so since the army had taken a very large number of the physically fit from industry. This left a larger proportion of defectives which industry had to use in order to keep up production. A physical examination enabled the physician and employment manager to gauge the capacity of these defectives and to place them at jobs which they were capable of doing. Control of sanitation and working conditions, education in hygiene and prevention of disease, and prompt treatment of all cases of accident and sickness—these were the means by which the health of the employe was protected, physical breakdown prevented, absenteeism and labor turnover diminished, efficiency and production promoted and costs decreased.

#### COMPENSATION LAWS

These advantages alone are sufficient to prove the importance of modern medical service in industry. There are several other factors, however, which increase its importance still more. Among them are the various workmen's compensation laws passed for the protection of the worker and now in force in the majority of the states. *Inasmuch as such laws made it costly for any factory to have a large number of accidents, it was soon found to be very profitable to install accident prevention devices, and to furnish prompt surgical aid for all injuries no matter how slight. This was merely good business, since lower accident rates and decreased periods of disability reduce the premiums which the plant has to pay, either to the state insurance fund or to private insurance companies.*

For a number of years the various state courts held that only accidents came within the meaning of the compensation laws. But gradually the injustice of allowing compensation for an injury causing disability, say, for a few weeks or months, and refusing to compensate for diseases due directly to the occupation,—*e. g.*, lead poisoning, which might cause disability for years,—began to be recognized. Until 1917, however, Massachusetts was the only state allowing compensation for occupational diseases.

Since then California, Wisconsin, Massachusetts, Connecticut, the Federal Government and the Territory of Hawaii have instituted it. *Sentiment is now fast increasing, in favor of compensation for industrial diseases, and the*

*signs of the times indicate that before long they will become compensable in a number of states. This will mean that good business will then require industry—even more than it does now—to protect its workmen from such diseases, even as it was compelled to protect them against accidents. To protect workers adequately from occupational disease a well organized and capable medical department is necessary.*

#### SCOPE OF MODERN INDUSTRIAL MEDICINE

The scope of present-day medicine is so broad that it includes, not only every branch of medicine and surgery, but sociology as well. In the language of Dr. Mock, it "deals with the human maintenance equation in industry." It concerns not only the individual and his family but "the large group associated with him—his fellow employes and employer."

Its long list of functions and activities can be summarized under two main heads—*prevention* and *treatment*. Prevention in industry comprises two broad divisions—prevention of disease and prevention of accidents.

*Prevention of Disease.*—One of the factors in the prevention of disease in the factory is the proper vocational placement of workers. This necessitates very close cooperation and coordination between the medical and employment services. The latter judges whether a man is mentally fit for a job and the former whether he is physically fit. To be able to judge correctly whether or not an individual is physically capable of doing certain work, several things are necessary.

The first requirement is that the physician know thoroughly the physical requirements and special hazards of every job in the plant. This means that he himself should study the jobs: otherwise his judgments may be faulty. The second essential is a thorough knowledge of the physical condition of the worker. This brings us to the important subject of physical examination of employes, which is one of the greatest value in the prevention of disease.

*Physical Examination.*—The first examination an employe receives is when he is hired. An examination is necessary at this time for several reasons: *First*, by means of the physical examination, the doctor can tell whether or not a man is physically fitted to perform the duties which the employment manager has in mind for him. If he has a valvular heart lesion, for instance, he should not be permitted to perform work requiring heavy lifting, sudden exertion or exposure to high temperatures: if he has flat feet or varicose veins, he should not have a job that requires constant standing. Occasionally a man is found with a defect which bars him from all employment—*e. g.*, decompensated heart disease, active tuberculosis, a bad hernia, etc. Such cases, however, are comparatively rare,—their incidence being about 3 per cent. Proper use of



physical examinations, then, does not, in the main, exclude the physically defective from employment, but rather places them at jobs which they are able to perform with comfort and profit both to themselves and to their employer.

*Second*, it detects any physical defects or other subnormal conditions capable of being improved by some form of treatment or by simple operation.

If such are found, the prospective employe should be given the proper advice relative to his condition, for he is then in a receptive mood and any advice given is likely to fall upon fertile ground. Hypertrophied tonsils, poor teeth, poorly developed lungs, etc., are conditions of this type, the remedying of which improves the health of the individual and increases his efficiency, thereby making him of more value to his employer. *Third*, it detects and excludes contagious diseases from the factory—for example, a case of active tuberculosis. Such a case might be the means of conveying tuberculosis to a number of fellow workmen. *Fourth*, this initial examination period gives the medical officer a fine opportunity to give the new men proper and necessary instruction in personal hygiene and in the prevention of the occupational diseases which they may run the risk of contracting in their work. Five minutes of personal instruction at this time is of more value than dozens of bulletins later.

Suppose that, the first examination successfully passed, an applicant is hired. If he is a little below par—*e. g.*, has a heart or lung lesion—or if he is assigned to a job on which he might contract some occupational disease, he is examined periodically for evidence of that disease, and at each examination care is taken to emphasize the precautions which should be taken to prevent illness. This reexamination “plays a three-fold part; it benefits the employer, the employe and the examining physician. It enables the employer to have efficient workmen; it enables the employe to keep in such a fit condition that he may earn the largest possible wage, and it gives the physician valuable information as to the conditions under which certain defects do well. It also makes it possible for him to see that remedial measures are intelligently carried out.” (Curran).<sup>1</sup> All employes who are assigned to jobs in the factory, kitchen or lunch room should also undergo periodical examinations for the protection of the other workmen.

If any employe is later transferred to some other department or process, he is again examined to make sure that he is physically fitted to carry on his new work. If at any time he does not feel quite well, or if his foreman thinks he appears sick, or if for some unknown reason his work has fallen off markedly, he is again examined on the chance that some latent disease is becoming active or that some new illness is coming on. In this way tuberculosis, typhoid,

anaemia and other diseases are sometimes detected. If he has been absent from work for a prolonged period because of sickness, accident or other cause, he receives an examination when he returns to make sure that he brings no contagious disease into the plant, and that he himself is able to resume his work.

Finally, when for any reason a worker leaves the employ of the company, he should receive another examination. This would make his record complete for the period for which he was employed, and in many cases would have a definite scientific value. Furthermore, it might serve as a protection to the company if he should become ill soon after leaving and charge that his illness is due to some factor in the plant.

*All examinations should be reasonably thorough—say, as thorough as those given army recruits or applicants for life insurance—and careful records of each should be kept on each employe's history sheet for the sake of future reference, comparison, and study.*

*A plan of physical examination in industry such as just outlined will be of immense importance in preventive medicine. Every worker so examined knows whether he is sound or defective. If the latter, he knows what he should do to remedy his condition. Furthermore, he knows the type of work for which he is best physically fitted. When we consider the possibility of all the workers in this country having this knowledge, each one being examined and re-examined as he passes from department to department and from factory to factory, we begin to realize the great possibilities which such a program may have upon the future of preventive medicine—possibilities perfectly possible of realization.<sup>2</sup>*

#### INSTRUCTION IN HYGIENE AND PREVENTION OF DISEASE

Aside from the instruction given the employe at the time of his various examinations, the industrial physician has at his disposal a number of other means for educating the workers in the essentials of disease-prevention. Brief talks on some health topic, often accompanied by demonstrations, may be given occasionally during the lunch hour. For example, in many factories such talks were given on the prevention of influenza during the several epidemics. These can be alternated with educational moving pictures such as are supplied by anti-tuberculosis societies and by state boards of health.

*Attractive and striking posters and bulletins or articles in the factory paper emphasizing some one important fact in disease-prevention are often of value. Some medical departments find that it pays to enclose in the pay envelopes leaflets written in clear simple language, illustrated when possible, upon subjects of health prevention and the symptoms of the more common diseases, coupled with simple advice as to their preven-*

tion. This has been a practice with the Norton Grinding Company for some years. The employes of this company now look forward to these leaflets and, in case they are omitted, ask for them.

In large plants, instructions in the essentials of first aid are given to picked men from the various departments, so that if an employe is overcome with fumes, heat exhaustion, etc., proper aid may be given him at once and more serious developments often forestalled.

#### THE DENTAL CLINIC

Another factor in prophylaxis, and one which every modern industrial medical department should take advantage of, is the factory dental clinic. Its functions are: (1) examination and consultation, (2) prophylaxis, (3) relief of pain, (4) consultation with the medical department, and (5) the filling, treating and extracting of teeth. At present we are concerned with the first two of these functions; the others will be discussed later.

The employe's acquaintance with the dental clinic begins immediately, for examination of the teeth should be a part of the physical examination of all new employes. After he is hired, the employe is at liberty to go to the dentist at any time for examination and consultation. At such times the dentist shows him by mirrors and by models, if possible, the exact conditions present, the deposits of tartar and what they mean, and the beginning of pyorrhoëa. If any work is necessary—not due to conditions in the factory—he is advised of its nature and the probable cost. The relation between bad teeth and certain obscure diseases, such as rheumatism and anaemia, is explained to him. He is shown the proper way to care for the teeth at home, the best type of brush to use, and the first indications of trouble.\*

All employes are urged to take advantage of the free prophylactic treatments which are given—twice a year if possible. In this way the employe's oral cavity is kept clean and healthy and the dentist is sometimes able to detect diseases in their incipency and refer them to the medical department for prompt treatment. Measles detected by Koplick's spots, primary lues (detected by mucous patches), and other diseases are sometimes discovered in this way, and by the institution of prompt treatment the individual is greatly benefited and his fellow workmen protected. The functions of the Factory Dentist and Physician have been very well co-ordinated by Dr. Elliot in the various plants of The National Lamp Works.

#### THE MEDICAL CLINIC

A medical clinic should be maintained for the treatment of minor illnesses, and employes encouraged to report these as soon as they feel below par. By this means many serious diseases and even epidemics may be prevented, for often

headaches, constipation, malaise, slight fever, etc., are but the forerunners of more serious affections. Industrial medical departments are sometimes able to aid greatly in the campaign against venereal diseases. By leaving out the moral side of the question, the confidence of the men is easier to gain, and by the use of prophylactic treatments, such as have been used by the army and navy with such remarkable results, and by talks and educational bulletins, the incidence of these diseases can be markedly decreased.

All of the foregoing measures are aids by means of which a live medical department can do much to keep epidemic diseases out of the plant. Other means at its disposal are: (1) the administration of vaccines, *e. g.*, typhoid vaccine, (2) the supervision of water supplies, (3) supervision of garbage and sewage disposal when the plant is a community in itself, (4) the supervision of kitchens, lunch rooms and food handlers, (5) supervision of plant sanitation, (6) supervision of barracks where such have been erected, (7) follow-up work of absentees and improvement in the home conditions through the aid of the visiting nurse, and (8) close cooperation with the local and state health departments.

#### IMPROVEMENT OF WORKING CONDITIONS

Occupational diseases are due to working conditions—exposure to poisons, fumes, dust, eye-strain, undue fatigue, monotony, excessive heat, humidity, cold, noise, etc. *It becomes necessary, therefore, in order to prevent occupational diseases for the industrial physician to become very familiar with the processes of manufacture and the actual working conditions in his plant. It is his job to improve working conditions whenever possible, for by so doing he not only protects and improves the health of the workers, but also increases production. He must therefore make periodical inspection of the conditions in the plant, and it often becomes necessary for him to make special investigations and studies on certain problems to devise ways and means of overcoming certain deleterious effects, thereby improving the health and comfort of the employes.* The importance of this function was repeatedly emphasized during the war, when industrial physicians were confronted by such occupational diseases as aniline and T. N. T. poisoning.

An experience of the writer's also illustrates it. The incidence of infection in a large plant in which he was serving as an industrial physician reached the alarming rate of 5 per cent. By special research work the cause of these infections was discovered, a remedy found, and the rate of infections and furunculosis dropped to less than 1 per cent.

It is desired here to emphasize the necessity for the reporting of all cases of occupational diseases to the state departments of health by industrial physicians. This has been too long



neglected. It is only by the prompt and thorough reporting of all such cases that constructive progress can be made in the prevention of occupational diseases.

#### PERSONAL SERVICE FACILITIES

Closely associated with the working conditions of a plant, adequate personal service facilities are also of importance in the prevention of disease. The medical department should therefore supervise drinking, washing and bathing facilities, dressing and locker rooms, toilets, rest rooms, lunch rooms, and gymnasiums. The indirect supervision of the recreation features, athletics, etc., should also be a function of the medical department. This of course necessitates very close cooperation and coordination with the welfare department.

This variety of function makes it evident that the industrial physician should qualify himself in technical knowledge, so that he may be consulted when plans are drawn for new buildings. When he is thus equipped in addition to his medical training, his advice is of value on ventilation, heating, dust and fume removal, air conditioning, placing of machine banks relative to source of light, illumination, adequate personal service facilities, and a number of other things.

If properly and conscientiously performed, these various functions would, by reason of affecting so many people, become one of the greatest factors in the preventing, not only of communicable diseases, but of all preventable diseases.

#### PREVENTION OF ACCIDENTS

Although mainly a function of the safety department, the prevention of accidents also comes within the domain of the medical department to some extent. The close cooperation of the two departments is absolutely essential. The medical department obtains a record of the cause of all accidents. These records are immediately turned over to the safety engineer, who looks up the case and tries to find a way to prevent like accidents in the future. Continuous campaigns of education are carried on by means of moving pictures, talks, demonstrations, bulletins, articles, etc. The need for immediate attention for all accidents, no matter how trivial, is impressed on the men in order to prevent sepsis and other serious effects and to decrease the period of disability.

Obviously workers with physical defects, *e. g.*, an eye or an arm missing, should not be placed at hazardous occupations. The employment service takes care of this. Such men, however, need not be refused employment, since there are usually some jobs in the plant at which they may work with perfect safety.

#### MEDICAL AND SURGICAL CARE

The prompt treatment of all accidents has be-

come almost universal in the industrial world, and there is now hardly any factory in the whole country that does not make some provision for its injured employes. In order to accomplish the best results in treatment, accidents should be promptly cared for at the plant dispensary. Self-treatment by employes and by untrained foremen should be prohibited. By these means only can injuries receive proper treatment, sepsis be prevented and periods of disability minimized. In large plants having a number of scattered dressing stations in charge of registered nurses, it is not necessary to send all of the minor injuries to the central hospital where the physician maintains his headquarters. Properly trained nurses are perfectly capable of treating such wounds themselves. Of course the physician makes daily rounds and supervises their work. Ambulant cases are required to call for re-dressings at whatever intervals the doctor stipulates. Each foreman can keep close tab on all men under him having minor injuries, and can see that they report promptly at the appointed time for re-dressings. Some cases, especially those that are infected, benefit greatly by frequent dressings, *i. e.*, several times a day. Cases with foreign bodies in the eye should report every three hours after the foreign body has been removed for argyrol instillations and hot compresses. Incapacitated cases are first treated in the factory hospital if possible, and are visited subsequently either at hospital or home by the plant physician or by the physician of their choice. The visiting nurse also calls on these cases and assists in their care.

Absentees should be carefully followed up, for by so doing accidents, often infected, may be found which have escaped the notice of the medical department. Such cases occasionally happen even with the best medical organization. The writer was recently told of such a case by the superintendent of a large foundry. One of the lathe operators had been absent several days and was accordingly looked up. He was found at home with a slightly swollen finger from a small puncture wound and complaining of malaise. He thought the wound too trivial to mention and had not told his foreman about it. When he called at the dispensary the next day to have it dressed, as a result of the follow-up visit, his finger was twice its normal size and a severe case of lymphangitis had developed. It was subsequently necessary to amputate the finger, and only very strenuous effort saved his hand. Had it not been for the follow-up work in this case, much more severe results would have followed. The case also illustrates the evils of self-treatment and neglect of trivial injuries.

Closely associated with the proper care of injuries is the replacing of the injured men, or of those partially incapacitated by occupational disease, such as paralysis due to lead poisoning. At the time of the first treatment the physician

decides whether the man can return immediately to his old job without aggravation of the injury, whether he can return to work immediately if he is transferred to work of a different character which will not retard his recovery, or whether he must be temporarily prohibited from working. This requires a thorough knowledge of every job in the plant and close cooperation with the employment manager and safety engineer. If the man can be sent back to work, it means a saving both to himself and to his employer. Perhaps the majority of cases can return immediately to their old jobs, since most of the cases treated by dispensaries are of a minor nature and, if they are properly cared for, the employe runs no risk. A number of cases of even moderately severe injuries, such as amputated fingers, etc., can be put back to work almost immediately if they are given work which does not necessitate use of the injured part.

It is a function of the employment manager to find a job for which these cases are physically suited. These two types of case must be closely watched until complete recovery to be sure that convalescence is successful. By means of this supervision and by cooperation with the safety and employment departments, the man can be placed on heavier work again as soon as he is able to do it. Some of the occupational diseases and a certain number of injuries are such that the man must be prohibited from all employment for a time. The man's foreman and the employment office should be notified immediately, that another man can be secured for the job and so that the productive power of the machine is not lost. These severe cases should not be permitted to return to work until they receive the doctor's consent; otherwise their recovery may be retarded and their efficiency impaired. It is therefore necessary to require that they present a card from the doctor to the foreman, or to the employment manager, when they are able to return to work. During convalescence it may be possible to place them at lighter or different work at their usual salary, provided that the amount of risk involved, the character of the injured or diseased man (i. e., whether or not they take advantage of the opportunity and loaf on the job) and the consequent effect on the morale of the other workmen is such that this is better business than the continued paying of compensation. *The replacing of men incapacitated by injury or disease is therefore, a co-operative function of the physician who furnishes the medical attention and judges the man's physical condition, the safety engineer who passes on the risk involved and decides whether it is good business to continue or to stop the period of enforced idleness, and the employment manager who finds a suitable job.*<sup>4</sup>

#### THE TREATMENT OF DISEASE

It is just as necessary for industry to

care for the diseases due to working conditions as it is to treat the injuries caused by them. A large number of plants now treat their cases of occupational disease but a great number still do not. An example of the latter group is the pottery industry, which does not take care of its cases of plumbism. Legislation is soon to provide for the treatment of and compensation for occupational diseases under the "Workmen's Compensation Acts," and all factories will be compelled to care for such cases by reason of economic pressure. Of course most plants now take care of the more obvious occupational diseases, such as dermatitis, aniline poisoning, T. N. T. poisoning, caissons disease, etc. It is the less evident diseases, such as neurasthenia, tuberculosis, etc., that are slighted. A number of plants, however, are caring for such diseases on their own initiative. For example, The Carborundum Company sends tuberculous employes to the tuberculosis sanatoria free and cares for their dependents while they are receiving treatment. Sears, Roebuck & Co., have a farm to which tuberculous employes are sent with splendid results, and the Crane Co., has a convalescent camp where run-down people can be kept and taught how to live. All cases of occupational disease should be promptly removed from the source of the disease, whether that be dust, fumes, chemicals, improper illumination, inadequate ventilation, monotony, or what not. Cases occurring in any plant should be used as object lessons to the other employes and as a means of emphasizing the importance of the various preventive measures. Every case of occupational disease should be considered by the industrial physician as a notification of some condition in the plant possible capable of improvement, and he should try by every means at his disposal to remedy that condition.

Many industrial dispensaries now treat the minor illnesses not due to employment. These are those conditions for which the employe would not ordinarily seek an outside doctor's advice but which, if not cared for, materially reduce the working capacity of the individual, impair his efficiency, and may ultimately lead to more serious conditions. Headaches, coryza, sore throat, etc., are examples. Such cases are usually treated with simple drugs, which in a majority of cases is sufficient. The relief of pain is of great importance in industrial work. The factory dentist can aid greatly in this important function, by caring for abscessed teeth, exposed nerves, etc. It often happens that when an employe reports for work in the morning, after a sleepless night, because of toothache, if his pain is not promptly relieved, he loses the work of an entire day. Treatment of such conditions therefore markedly increases the efficiency of the worker.

Through consultation with the plant physician, the factory dentist is often of great value in the



diagnosis and treatment of more serious diseases, such as rheumatism, arthritis, neuritis, neuralgia, anaemia, etc. In many cases these conditions are caused by oral sepsis, and the removal of the sources of infection in the mouth is often followed with remarkable benefits. For this reason careful medical and dental records should be kept in a file readily accessible to both departments as in the plants of The National Lamp Works so that the results of combined medical and dental treatment can be carefully studied. Unless caused by some condition in the plant, e. g., manufacture of certain acids, dental caries and diseased gums are not usually treated in the factory dental dispensary, but the patient is referred to some reputable outside dentist who does this work.

The same course is usually followed in the treatment of the more serious illnesses, except in rare instances, or in large isolated industries, such as mines. In these it is often necessary for the industrial physician to treat all of the diseases of the employes as well as those of the employe's family. He is much aided in this work by the visiting nurses, who go into the houses and teach the proper care of the sick, personal and home hygiene, etc. Usually, however, the industrial physician does not treat medical cases requiring careful constant attention, or illnesses incapacitating men from work. *In the words of Dr. W. Irving Clarke, of the Norton Co., the medical function of the shop hospital is that of a "diagnostic clearing house," where the serious cases of illness are diagnosed and the man immediately referred to his family physician or to a specialist when one is indicated, with all the data on the case which the factory physician has been able to obtain.*

As an aid to proper medical and surgical care of employes adequate laboratory facilities, including an X-ray, are almost indispensable. Follow-up work of absentees either by a nurse or by a representative of the employment department is also of great value. In this way it can be made certain that: (a) No man has received an accident and failed to have it cared for in the dispensary. (b) No employe has a contagious disease which is unknown to the medical department and which has not reported to the Health Department. (c) No employe is sick and has failed to receive adequate medical care on account of his financial condition. (d) No patient who has been coming regularly to the hospital is absent from work because of some trouble arising from the injury. (Clarke.)

#### ASSISTANCE IN SECURING COMPENSATION

By virtue of having all the facts in its possession, the medical department is in a position to render aid in the securing of compensation for injuries equitable to both employe and employer. In some cases this is done through cooperation with the "legal," "claims" or "compensation"

department; in others through some clerk in the medical department who attends to the proper filing of the various records and papers with the compensating agency.

#### COOPERATIVE MEDICAL SUPERVISION FOR SMALL PLANTS

A system of medical supervision, such as has been described, is too costly and too big for many small factories to handle. Unless, therefore, some other system can be devised, both these small factories and their employes lose the benefits of proper medical supervision. In order to solve this deficiency the cooperative plan of medical supervision has been proposed. Under such a system one complete central medical organization would be maintained by a group of industries, each member of which would receive all the benefits of good medical supervision, the cost being divided among them according to the number of employes, the type of industry, and the condition of the plant of each. With such a cooperative plan, employment, medical, safety, welfare, and compensation departments could be maintained. The advantage of such a plan is that it would enable small plants to gain the benefits of a whole-time medical service at a cost wholly within their reach.

An example of cooperative medical care for industry is supplied by the work of the United States Public Health Service at Chattanooga, Tennessee. Here the Public Health Service is operating three industrial clinics for the treatment of venereal disease. These clinics are paid for by thirty-eight small manufacturers on a pro rata payroll assessment.

#### SUMMARY

The scope of present-day medical supervision of industrial workers can be summarized as follows:

1. Vocational placement of workers, necessitating thorough job analysis.—Safeguards health and maintains production at a maximum.
2. Physical examination of all new employes in order to—
  - (a) exclude communicable diseases;
  - (b) exclude all cases unfitted for employment by reason of some gross ir-remediable defect;
  - (c) discover remediable defects and advise methods for their correction;
  - (d) have a basis for all treatment which may be later given in the plant dispensary;
  - (e) make intelligent vocational placement possible;
  - (f) grasp an excellent opportunity to give personal instruction in personal hygiene.

- giene and prevention of occupational diseases.
3. Physical examination of old employes whenever necessary in order to—
    - (a) detect beginning occupational diseases among workers exposed to such;
    - (b) detect communicable and other serious diseases in their incipency;
    - (c) prevent the introduction of communicable diseases by employes who have been absent for some time, and to make sure that such employes are able to resume work;
    - (d) complete records and protect the company in case the employe leaves.
  4. Disease and accident prevention and education in hygiene by means of—
    - (a) personal interviews; (b) talks;
    - (c) moving pictures and demonstrations;
    - (d) bulletins; (e) booklets in pay envelopes;
    - (f) articles in plant papers; (g) first aid classes;
    - (h) vocational placement of workers; (i) utilization of accident records to prevent similar accidents;
    - (j) cooperation with safety department.
  5. Dental clinics, the functions of which are:
    - (a) examination and consultation;
    - (b) prophylaxis;
    - (c) relief of pain;
    - (d) consultation with medical department;
    - (e) treatment of teeth and gums.
  6. Medical clinics, the functions of which are:
    - (a) prophylaxis; (b) a "Diagnostic Clearing House;"
    - (c) treatment of minor illnesses;
    - (d) treatment of occupational diseases (and in some cases treatment of all diseases);
    - (e) prompt care of all accidents;
    - (f) adequate laboratory and X-ray service.
  7. The replacing of men injured in industrial accidents or partially incapacitated by occupational diseases.
  8. The prevention of epidemics by means of:—
    - (a) physical examinations; (b) administration of vaccines;
    - (b) supervision of water supply, garbage and sewage disposal, plant sanitation, barracks, kitchens, lunch rooms and food handlers;
    - (d) improvement in home conditions through the aid of the visiting nurse; (e) cooperation with health departments.
  9. Follow-up work on absentees so that:—
    - (a) no accidents lack treatment; (b) no contagious diseases are missed; (c) no sick employe receives inadequate care; and (d) no complications arise in the treatment of any injury without the knowledge of the medical department.

10. The supervision and improvement of working conditions and personal service facilities.
11. Indirect supervision of recreation, athletics and other welfare activities.
12. Special studies and research on specific problems affecting the health, welfare and efficiency of the workers.
13. Advice on the construction of new buildings in so far as the health and welfare of the workers are concerned.
14. Assistance in securing compensation for accidents or occupational diseases.

#### CONCLUSIONS

In order that these various functions be performed smoothly and with maximum efficiency, it is necessary that the closest cooperation and harmony exist between the medical department on the one hand and the employment, safety, and welfare department on the other.

Modern medical supervision for industrial workers is one of the greatest single factors yet devised for the prevention of disease. According to Hayhurst,<sup>5</sup> over 50 per cent. of all deaths among occupied persons are preventable. This means that in the U. S. about a quarter of a million lives are capable of being saved every year by proper industrial medical supervision. Thus industrial medicine becomes a new arm of the health department, and makes possible preventive medicine on a scale yet undreamed of. It contributes to the national health and welfare by attacking such problems as personal hygiene, bad housing and living conditions, alcoholism, and venereal disease. It secures for the community a reduction in the sickness and death rates and in the resultant economic loss. Its educational possibilities applied to the workers and their families are enormous. It secures for the employe better working conditions, pleasant surroundings, an understanding employer, reduced periods of idleness from disease, minimum periods of disability from accidents, increased working capacity and thereby increased efficiency and better wages. It secures for the employer contented workers, physically adapted for their work, and kept in the best possible physical condition, a minimum rate of absenteeism and labor turnover and resulting increased efficiency and production.

1. Relation of Industrial Surgeon to Industry and to Society," John F. Curran, M. D., in "Employ Relations Activities," Norton Company, Worcester, Mass.

2. "Physical Examination and Medical Supervision of Factory Employes," W. Irving Clark, M. D., Boston Medical and Surgical Journal, Feb. 15, 1917.

3. "Keeping Workers Well," Ralph W. Elliott, M. D., Factory, May, 1919.

4. "Replacing Men Injured in Industrial Accidents," Earl B. Morgan, Safety Engineer, in "Employee Relations Activities," Norton Company, Worcester, Mass.

5. E. R. Hayhurst: The Health Hazards of Industry with Special Reference to Ohio, Monthly Bulletin, Ohio State Board of Health, April, 1914.



## The Relation of the Industrial Physician to Existing Public Health Agencies\*

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**Editor's Note.**—It is the duty of the industrial physician to keep the men on the job, if possible, and because of the numerous problems encountered and the time consumed in that connection it is likely that he has been absorbed to the exclusion of still further possibilities, particularly the advantages of more intimate contact with the various bureaus of his local health department, tuberculosis clinic, venereal clinics, baby dispensaries, nursing organizations and other agencies equipped to render him valuable service. As a solution of the problems presenting, Dr. Albaugh conceives of a division or bureau of industrial hygiene and medicine in the local health department which would be in close touch with all the industrial physicians and the various treating and relief agencies in a given locality and serve as a clearing house for them.

THE physician in the health department and the physician in industry are undoubtedly striving for the same result, but there unfortunately appears to be a different viewpoint and a lack of unified effort which is not resulting in the best interests of the cause they serve. The few remarks I have to make are prompted by a rather limited experience in both lines of work and a keen realization of the need for co-operative, concerted effort on the part of all physicians interested in the promotion of health.

### EXTENDING FIELD OF INDUSTRIAL MEDICINE

The growth of the field of industrial medicine has been extremely rapid. Certain groups have been slow to recognize it as a branch of organized medicine, and industrial physicians themselves have scarcely been able to keep pace with its remarkable advancement. It has taken time for the industrial physician to readjust himself to the varied requirements which are met in industry. He is called upon to face problems which he never had cause to consider in private practice, nor were they mentioned, until recently, in his training as a medical student. *Industrial executives have been quick to recognize the value of the industrial physician as a medium for more intimate contact with labor. It is believed that through him there will gradually be brought about a better understanding by both capital and labor of the feelings of one group toward the other, and the realization that after all supposed grievances are only apparent and not real.*

### LACK OF CONTACT WITH HELPFUL HEALTH AGENCIES

The physician gained entrance to industry for the sole purpose of treating injuries. Later the treatment of minor illness was added to his duties, and gradually sickness prevention, accident prevention, welfare, recreation, insurance, employment and industrial relations were turned over to him as the possibility of his handling them was recognized. *It is his duty to keep the man on the job if possible, and because of the*

*numerous problems encountered and the time consumed in that connection, it is likely that he has been absorbed to the exclusion of still further possibilities, particularly the advantage of more intimate contact with the various bureaus of his local health department, tuberculosis clinics, venereal clinics, baby dispensaries, nursing organizations and other agencies equipped to render him valuable service.* Possibly he has been a little lax in reporting industrial diseases to the State Department of Health, and communicable diseases to the local health department. He may have failed to take advantage of the health department laboratory for diagnostic purposes or the tuberculosis clinics to whom he can refer indigent tuberculous cases with the satisfaction of knowing that they will be placed in municipal or state institutions if circumstances warrant, and that they will receive good care. He may have forgotten that the venereal clinics are probably in a position to give his venereal patients better treatment than he is able to give them, or that the visiting nurses' association stands ready to supervise the bedside care of patients whom he has sent home because of illness and who are not in a position to afford a private nurse.

On the other hand the industrial physician may feel that the various agencies mentioned do not meet him "half-way." His rise has been so rapid that they may not have a full realization of the position he occupies. They think of him as the "shop doctor" and do not appreciate his diversified activities, nor do they recognize in him the one person through whom they can get in touch with conditions which should claim a great deal of their attention. He may feel that they have caused to be passed in state legislatures laws that *require* certain things of him, but that there are no laws that require anything from them for him. It is probable that of all the activities of the various public health organizations the diagnostic laboratories of the local and state departments of health are appreciated more by industrial physicians generally than any other activities. This is due to the fact that he gets direct, definite results; he submits a specimen for diagnosis and gets a report on the findings.

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

It is believed that this proceeding might be extended to other activities.

#### DIFFICULTIES IN SECURING COOPERATION

I have in mind a case of early tuberculosis which was referred by an industrial physician to a tuberculosis dispensary with the request that the patient be given institutional care if possible, and with the request also that a report be made to him concerning the disposition of the case. No such report was made to the industrial physician and several weeks later the patient was recognized when he came to the plant dispensary for the treatment of an injury. Upon investigation it was found that the tuberculosis dispensary was unable to obtain a bed for the patient in an institution and the patient was sent home with the instruction to return again in a month. In the meantime the patient had gone back to his former employer and obtained employment under an assumed name. Had the circumstances been reported immediately to the physician referring the case it is probable that arrangements could have been made for the support of the patient by the employer in the interim between the diagnosis and the time that institutional care was available. I have in mind also a case of tuberculosis that was given institutional care with funds provided by his former employer. The physician employed by the company experienced considerable difficulty in getting satisfactory reports of the patient's progress at regular intervals. It must be remembered that the practicing physician and the industrial physician have a somewhat different interest in cases of this kind. The practicing physician is chiefly interested in giving his patients the best advice and attention possible while they are under his care, but the industrial physician has the additional interest of getting the man back on the job, which is to the mutual interest of the employer and employee.

I had occasion recently to send one of our employes to a venereal clinic for treatment, sending with him copies of two 4 plus Wassermann reports, both blood examinations having been made within a month preceding the date he was sent to the clinic. He was refused treatment at the clinic unless he submitted to another blood examination, which he refused to do. He had lost considerable time because of illness, was in debt, and unable to afford treatment except for a nominal fee. He refused to go to another venereal clinic, and it became necessary to discharge him because of the danger of transmitting the disease to other employes. The third Wassermann may have been necessary, but the fact remains that one more untreated case of syphilis is probably now roaming at large.

Th instances cited are not to be construed as criticisms of either industrial physicians or the various organizations mentioned, but are intended only to bring out the lack of close cooperation necessary for best results.

#### LOCAL PUBLIC HEALTH BUREAUS OF INDUSTRIAL HYGIENE AND MEDICINE

The United States Public Health Service has devoted considerable attention to industrial hygiene and medicine for a number of years. Several states have shown some interest in industrial medicine, one or two of them creating divisions of industrial hygiene and medicine in their state health departments, our own state in particular. Two cities, to my knowledge, have created similar bureaus in their health departments. These organizations have been severely handicapped by the uncertain standing that industrial medicine has had in the past. Much time and effort has been devoted by them to selling the idea of industrial medicine to industry. A great deal of time and effort has also been spent in investigative work with the idea of determining health hazards and their effect on individuals exposed. Industry as a whole was not quite ready to accept them, and was rather skeptical of the sincerity of their motives. The fact remains, however, that it is largely to these pioneer organizations that industrial medicine owes its present high standing. It is possible that at least some of the efforts of these organizations have been somewhat misdirected. It would seem that local organizations of this kind might be of more value in handling matters of a more routine nature. *I can conceive of a division or bureau of industrial hygiene and medicine in a local health department to which the industrial physician could refer all problems that might be handled by existing agencies. This division or bureau would be in close touch with all the industrial physicians and the various treating and relief agencies in his locality, and serve as a clearing house for them. Under such circumstances there would never be doubt in the physician's mind as to the course for him to pursue when it became necessary to refer to the outside cases which come to his attention. I refer, of course, to cases unable to afford competent outside medical care. This arrangement would apply also to many problems other than cases of illness. Under such a plan it would be the duty of the state organization to correlate and standardize so far as possible the activities of the various bureaus in the large industrial centers, and, in addition, to handle many of the problems of the smaller industrial centers direct. The investigative and research work would thus be left largely to the U. S. Public Health Service.*

This may or may not be a practical solution of a condition which many of us feel is now rather unsatisfactory. It is possible that all that is necessary is a wider knowledge of the public health work done by different organizations and individuals and a resolve on the part of each one of us to have a little more consideration for the other fellow.



## The Training of Industrial Physicians<sup>1</sup>

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**Editor's Note.**—Just as public health work led to the requirement of specialized training so with the development of industrial medicine has come the realization that herein lies a specialty in medical science that requires of the physician special theoretical and practical training, which in the past has ordinarily been outside the sphere of medical education. The need for special training of physicians engaged in industrial work has been recognized by the profession none too soon nor too widely. The present facilities for training, even in the 31 medical schools offering various opportunities, are still inadequate and there is a marked lack of uniformity in standardizing entrance requirements, courses and certification. The profession through its official agencies and the influence of the state societies should see to it that the demand for special training, hygiene efficiency and competence in industrial medicine and surgery are promptly met.

IT took the medical profession quite a while to realize that the possession of a sound medical education did not, per se, qualify a man adequately to carry on the duties of a health officer. The profession has likewise been somewhat slow to recognize that the acquisition of sound surgical technic or skilled diagnostic ability does not qualify a man to carry on the duties of an industrial physician. Just as public health work led to the requirement of specialized training, so with the development of industrial medicine has come the realization that herein lies a specialty in medical science that requires of the physician special theoretical and practical training, which has in the past ordinarily been outside the sphere of medical education. Moreover, it is just becoming apparent that the profession has in a measure failed to grasp an opportunity for the extension of its influence and the utilization of medical knowledge and experience toward the prevention of disability and the shortening of the disability period, the profession's duty to society.

The need for special training of physicians engaged in industrial work has been recognized by the profession none too soon nor too widely. Modern industrial management has been quick to distinguish between the physician trained in industrial medicine and the physician catering to industrial practice.

Urban health officers have long seen in the work of the industrial physician valuable and much needed assistance in constructive health work, for such can be prosecuted intensively among industrial personnel as it can in no other group.

Civic bodies, social workers, large industrial corporations and community organizations have seen that the old-time plant physician did not render to industrial personnel the maximum service that could justly be expected of medical science.

With the realization by these several groups of society of the need for specialized training of medical men, several of our colleges have offered such training facilities.

### PRESENT FACILITIES FOR TRAINING<sup>1</sup>

There are thirty-one medical colleges or universities offering training facilities or instruction in industrial medicine or related subjects. Of these there are two schools offering courses in this subject, leading to certification on satisfactory completion; ten schools offer a limited amount of work in the curriculums leading to the degree of Doctor of Medicine; four universities offer some instruction in vocational hygiene during the course leading to one of four degrees in public health, the requirements of which are not standardized, while fifteen schools offering postgraduate public health instruction include limited instruction in industrial medicine or related subjects.

Thus we see that there are, first, inadequate opportunities in the United States for the physician to receive either theoretical or well directed, practical instruction in industrial medicine, and secondly, that such courses of instruction as are offered show a marked lack of uniformity in conduct and standardization both of requirements for entrance and completion (certification).

It is hoped that the profession will interest itself sufficiently in this exceedingly important function of medicine to stimulate a more general inauguration of industrial medical training facilities in our medical schools, with a standardization of requirements for completion and some uniformity in type of courses of instruction.

In anticipating such action on the part of our schools, it is essential that a clear and complete understanding as to the basic requirements of an industrial physician be fully discussed, toward the end that the necessary facilities for the training of such specialists be provided. It is a discussion of this subject that I have been asked to open.

On attaining the degree of Doctor of Medicine, the future industrial physician should look forward to assuredly one year, and preferably two years of postgraduate general medical experience before he assumes the study of industrial medicine. One year of this time, at least, should

<sup>1</sup>Read before the Section on Preventive Medicine and Public Health of the American Medical Association, during the Seventy-First Annual Meeting, at New Orleans, April, 1920. Courtesy of the Journal A. M. A.

1. I am indebted to Mr. Royal Meeker of the Bureau of Labor Statistics for the information and data here given.

be spent in internship. The experience to be gained in outpatient clinics, in dispensary work, on emergency service and admitting wards in general hospitals will be found of value. Such post-graduate experience should be supplemented, if possible, by work in night clinics, industrial clinics, industrial health centers, public health agencies and municipal dispensaries. It is in such places that he will study, if he is thoughtful, not only the sick individual, but the sick as a group. Such experience, supplemented by some general private practice, is invaluable. If not socially minded, he will acquire a social point of view, and he will see at first hand the medical, social and economic problems confronting society and awaiting the assistance that the medical profession has in its power to grant.

#### SPECIALIZED TRAINING

The completion of this instruction and experience, if taken advantage of, should afford a good groundwork for entering industrial medical training. It should be given in an A-1 college, either in a special department or in a division of the department of preventive medicine.

#### HYGIENIC TRAINING

Hygienic instruction will fall naturally into two classes, medical and engineering.

The first should cover the subject of vocational hygiene in its entirety. The student should be taught to recognize occupational affections, not only direct, specific occupational diseases, but the indirect effect of occupation on the physiology of man, though masked by subsequent acute intercurrent pathologic conditions. Among these none is more important than that of industrial fatigue. In this subject the basic physiologic facts should be acquired, but he should not allow himself to become too academic, realizing that industry is essentially practical. The student of industrial medical science should here acquire a knowledge of personal hygiene in all its aspects and learn to impart this knowledge to industrial workers in a manner which is characterized essentially by clarity and brevity, so that large groups badly in need of benefits to be derived from this information can thus profit.

Foremost in personal hygiene is dental prophylaxis. Though this specialty in industrial medicine will be handled by the dental profession, yet it should not be introduced in industry without a medical department, and should be a part of such organization. The industrial physician should possess sufficient information on the subject to apply profitably the specialized knowledge of the oral hygienist or dentist.

The student at this time should acquire an extensive knowledge of medical supervisory systems. The experience and knowledge of those engaged in this type of work both in military organizations, public schools, insurance companies, industries and other organizations should be care-

fully acquired. He will at this time learn what is meant by, the purpose of, and the limitations of the physical examination in industry. The distinction between physical examination and medical inspection should be clear, with the scope and function of each definitely outlined. He should understand the inauguration and conduct of follow-up systems, and should profit by the knowledge and experience of those engaged in the organization and conduct of visiting nurse systems.

The industrial medical student can also profitably learn of those who have specialized in the subject of recreation and athletics for groups, and be prepared to institute such activities among industrial workers where indicated, in a manner which is consistent with the type of industry, the character of the work performed, and with other circumstances.

Engineering hygienic instruction is ordinarily outside the scope of training of the medical man. Many of these subjects are very broad and have given rise to specialists among engineers. The industrial physician, however, should have a sound knowledge of the subject, for on him will fall the duty of acquiring the desired conditions, even if he himself is not capable of carrying them out in detail. I refer to such as heating and ventilating systems and the problems of illumination, particularly artificial illumination. Elementary engineering principles of exhaust and supply systems should be well understood, and a thorough knowledge of the mechanical principles involved in the design, construction and operation of drinking water systems should be obtained. A study of the engineering phases of housing is of great value. He should acquire knowledge of the various sanitary equipment, such as toilet and wash-up facilities; baths, lockers; water supply and sewage disposal systems; and industrial waste disposal methods, also the specifications, outlay and conduct of restaurant or cafeteria systems; and he should be able to discuss with specialists in these various fields the basic problems presenting themselves, and so act as the adviser to the industrial management on these problems.

#### INDUSTRIAL CONSIDERATIONS

It should be immediately recognized by the profession that a physician cannot be successful if he has in his possession only a purely academic knowledge of the various phases of industrial medical work. The position of the physician in industry is unusual in the experience of the profession. He must first learn that his success in this field and the respect that he commands will result, not ex officio by reason of the fact that he possesses the title of doctor, but by the quality and type of his work. Unless he can apply his academic knowledge in a practical manner in full coordination with other branches of the industrial management, he will not receive the con-



sideration, either executive or otherwise, that he should. He must learn that his leadership depends on his ability sufficiently to convince his associates of the soundness of his views and activities. This type of leadership is at the other extreme, however, of that which attempts leadership through the dignity of the title doctor. He must learn that many activities which are theoretically sound are not practical. He must learn, in other words, that there is a compromise between practical industrial medicine and theoretical hygiene, and unless he can with this realization apply theoretical medicine only so far as it is practical, or so far as he can make it of practical value, he will be unsuccessful. He must learn, too, that the respect that he commands from the industrial workers will depend solely on the quality of his work and on his personality.

I know of no other place than in an industrial plant where the medical graduate, essentially an individualistic practitioner, can acquire all this experience and knowledge. It is my opinion, therefore, that the industrial medical training should be partly theoretical and partly practical—that the theory be given in the classroom and that the practical be given in industrial plants. At least one half of the period of training should be spent actually in the plant, associated with the various departments with which the industrial medical work is so closely associated. He should understand the basic principles of employment management and personnel relations. He should become familiar with training and apprenticeship systems, with the view of there applying preventive medical work. He should know of the organization and conduct of continuation or skilled schools, and if he is thoughtful he will immediately see an opportunity for the practical application of medical supervisory work. He should understand trade tests and their relation to mental tests and psychology. He should understand job analyses, time study and shift systems, and their relation to his academic knowledge of fatigue. He should learn of accident prevention and safety-first organization and activities and consider their intimate relation to first aid medical work; physical examination, mentality, acuity of vision and such hygienic subjects as illumination, of which he has academic knowledge. He should acquire the necessary knowledge to analyze and thoroughly understand and deduct information from various labor force statistics, such as absenteeism, turnover, rates of pay as related to cost of living, housing, food—and hence health.

#### SOCIAL AND ECONOMIC ASPECTS

The student should understand the various systems of education of large groups and the basic problems presenting themselves in Americanization activities. He should know state insurance, group insurance, liability insurance and such actuary problems as present themselves in

the mutual benefit associations and the pension plans. He should become acquainted with, understand, and enter into the local social and economic problems as such affect the industrial workers with whom he is concerned.

He should, in brief, have a sound medical education; ample practical experience in medical relief; a well rounded knowledge of preventive medicine; a thorough knowledge of vocational hygiene; an understanding of our present day social problems, and be able in the light of this knowledge to apply intensively to groups and in a practical manner the best that the medical profession has to offer to society.

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*Iodex, A Misbranded Iodin Ointment.*—(1) Claim: 5 per cent. iodine. Finding: iodine content only about 3 per cent. (2) Claim: free iodine. Finding: no free iodine. (3) Claim: absorbed through the skin, iodine can be found in urine 30 minutes after inunction. Finding: the assertion that iodine can be found in the urine after Iodex has been rubbed on the skin has been experimentally disproved. The preceding is taken from a poster of the A. M. A. Chemical Laboratory at the A. M. A. New Orleans meeting (Jour. A. M. A., Sept. 18, 1920, p. 930).

*Calcidin Tablets—Abbott.*—Calcidin is claimed to be a mixture of iodine, lime and starch. In contact with water, the iodine and lime react to form calcium iodide and calcium iodate. By the acid of the gastric juice, the calcium iodide and calcium iodate are decomposed with liberation of free iodine. The administration of calcidin tablets amounts to giving free (elementary) iodine. The effects produced by the administration of free iodine appear not to differ from those produced by the administration of iodides, and, therefore, calcidin has no advantage over the iodides, such as sodium iodide (Jour. A. M. A. Sept. 25, 1920, p. 892).

*Lyko.*—This is an alcoholic tonic which has been widely advertised in the newspapers. It is put out by the Lyko Medicine Co., Kansas City, Mo. Lyko is claimed to stimulate the appetite, tone up the digestive organs and to have laxative qualities. It is said to contain caffeine, kola, phenolphthalein and cascara sagrada. The advertising does not discuss the most powerful ingredient, alcohol, although the label declares the presence of 23 per cent. of this drug. As a result of an exhaustive examination, the A. M. A. Laboratory concludes that Lyko is essentially a sweetened solution containing about 22.2 per cent. of alcohol together with insignificant amount of caffeine, cascara extractives and phenolphthalein. There was no evidence to show that the product is sufficiently medicated to prevent its being used as a beverage. (Jour. A. M. A., Sept. 11, 1920, p. 757).

## Industrial Lead Poisoning\*

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Editor's Note.—In the past 20 years the incidence of lead poisoning, the typical occupational disease, in industry has been materially diminished by labor saving devices, substitution of insoluble lead compound and zinc for lead paint. Lead poisoning can occur under a great variety of circumstances and conditions and so the industrial physician and the general practitioner must be constantly on the look-out for it. It is claimed that it requires the daily intake of 0.2 grains of lead in the form of the carbonate, for a period of two weeks, to result in true intoxication in the normal individual. The symptomatology of both the acute and chronic forms is sufficiently diagnostic for all purposes if the condition is suspected. Lead poisoning should be reported to the local health department or the State Department of Health.

LEAD poisoning is the *typical occupational disease*. Solution of this problem points the way to solving the balance of occupational diseases. Today, this affliction is acquired almost invariably as the result of an occupational exposure. The practicability of compensation for occupational disease will undoubtedly be worked out first for lead poisoning cases. The symptomatology of this poisoning has been as well studied and presents as definite an entity as any occupational disease of constitutional character. In the past five years a few further features have been added to the knowledge of the acquisition and control of this poisoning which I shall attempt to delineate.

### ACQUISITION

"All lead poisoning arises from *inhalation of dust and fume*.\* This removed or prevented, there will be no lead poisoning," thus says Thos. M. Legge, His Majesty's Medical Inspector of Factories, who in his twenty years' experience in the notification of industrial diseases<sup>1</sup> has seen this affliction diminish almost exactly one half, from 1,058 to 522 cases per year up to the beginning of the war. While measures for cleanliness and periodic medical examinations must not be minimized, the chief causes for reduction in incidence of poisoning have been labor saving devices, substitution of insoluble lead compounds and the substitution of zinc paint for lead paint. The use of white and red lead paint have now been abolished in France and Great Britain except in very limited proportions,—too small or too insoluble to be a menace. During the war the high pressure of work in the three industries of smelting, lead burning and storage batteries caused, indeed, only a slight increase in the number of British cases. In 1899 there were 399 cases from the manufacture of white lead; in 1918 there were none—a remarkable evidence of the efficiency of control. Legge states that lead encephalopathy can only be due to inhalations of large quantities of lead dust, and one such case

should be the cause of a far more searching inquiry than ten cases of colic.

The permeability of the *intact skin* to lead has been investigated by Süssman<sup>2</sup> on cats who used lead oleate well mixed with vaseline and lead oxide made into a salve with cat fat. While under these conditions minute traces of lead could be recovered from urine and feces collected for 2½ to 7 weeks, he concludes, in a preliminary way, that poisonous effects could hardly be expected from such a low rate of absorption. Hence his experiments are in accord with the generally accepted view, that lead absorption through the skin is too limited to be of significance among workers.

Lead particles in *paint vapors* have been further investigated by Herman<sup>3</sup> who finds that such emission does take place from fresh lead paint contained in a pail but that such emission ceases after 48 hours. A painted room, likewise, emits a considerable number of very minute invisible paint droplets which consist of particles, not vapors, which tend to fall downward and the showering of which is present for at least two hours after completion of the work.

Lead poisoning from the use of *orchard sprays* resulted in the death of Oscar S. Watkins, Associate in Chemistry, University of Illinois, in February, 1919, after four years of illness.<sup>4</sup>

*Delayed lead poisoning* and that thought to be due to a sudden increase of metabolism were among the effects of military training on lead workers<sup>5</sup>. In their regular work they failed to show intoxication, but military drill brought it out, even weeks and months after quitting lead work. Similarly, acute lead poisoning has followed attacks of influenza, tonsillitis, injury, partial starvation, and after the administration of certain drugs like potassium iodide and the salicylates. Neurasthenia from lead poisoning is common<sup>6</sup>.

Erlenmyer<sup>7</sup> says that the concentration of lead in the circulatory cell fluids, the "*lead stream*", determines the actual poisoning. He gives an example of a woman who worked with lead during an 8½ hour day for long periods in perfect health. When her day's labor was lengthened to 10½ hours, she developed severe lead poison-

\*Read before the Medical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

† Italics are mine.—E. R. H.



ing within three months. When she again resumed work at 8½ hours she remained perfectly well.

Poisoning from the washing of lead *soiled work-clothes* is warned against by the Massachusetts General Hospital and special circulars for the instruction of housewives have been distributed.

The existence of lead poisoning as a factor in *obscure* disease is common<sup>8</sup>, and as a factor in chronic disability is especially commented upon by Dr. E. B. Starr, of our Ohio State Department of Health<sup>9</sup> who again emphasizes a general truth: That by far the great majority of occupational diseases of all types are of a chronic nature and are seldom diagnosed as to cause. Physicians engaged in the public practice of medicine rather than those in private practice, tend to see these things in the mass or aggregate form and to sense their total significance. It is not, however, until each physician in private practice, asks his chronic patient, "What is your occupation?" with a full intent of determining its influence on his patient that the proper association will be made. In Great Britain<sup>1</sup> the private practitioner only indicates the disease along with the occupation, when a "certifying surgeon", so-called, investigates the relationship and determines whether the given case is an occupational affliction or not and to what extent. In 1914 our occupational disease survey in the State of Ohio<sup>10</sup> showed that 2,585 out of 8,146 employes in the pottery industry were exposed to lead poisoning, of whom 109 were found so poisoned, or a rate of 42.9 per thousand exposed. Chronic poisoning was far more frequent in older workers,—one in six of those over 45 years of age. In some processes like "glaze dipping" and "glaze mixing" the rates were 126.5 and 176.5 per thousand respectively. In 1919 the United States Public Health Service<sup>9</sup> found 50 of the 109 cases we reported in 1914 to be still working. Forty of these were still definitely leaded. Of the 59 who had left work during the five year interim only 24 could be traced. Of these five had died, the balance had sought various occupations, chiefly farming, teaming, and the like.

Improvements in a number of the worse industries in Ohio have, however, naturally reduced the number of cases of lead poisoning. Furthermore the decision of the Supreme Court that occupational diseases were not compensatable by the Industrial Commission, threw many of these cases open to private suit. At times cases have been sued as lead poisoning which were obviously foolish, such as a case of chronic dacryocystitis. The enormity of sums asked for in suits for lead poisoning is worthy of notice,—\$25,000 being the amount in each of three suits against an Ohio establishment. Most of these suits are settled out of court. In an instance in Illinois, however, the International Harvester Company<sup>11</sup> had a verdict affirmed against it for

\$8,000 by a woman employe for alleged lead poisoning. It is well to point out here that none of the Ohio cases were reported to the Ohio State Department of Health, as they should have been according to law. Such efforts would have brought the State Department's assistance into these cases, as in all others, in the nature of unbiased evidence and perhaps obviated some miscarriage of justice. It is to be pointed out that a chief function of the State Department is to approve or disapprove an alleged occupational disease, but it must first be reported according to the regular form. The evidence submitted to the State Department also is not available for suit (according to the occupational disease reporting law), and in many respects this reporting of an occupational disease in itself automatically inhibits law suits.

#### WHEN DOES LEAD POISONING ACTUALLY EXIST?

The mere exposure to lead, even in the form of dust or fumes, does not warrant a diagnosis of leading poisoning in a sick individual. *It is claimed that it requires the daily intake of two-tenths grains of lead in the form of the carbonate for a period of two weeks to result in true intoxication in the normal individual.* True, this is a small amount and most workers who get "leaded" inhale much more than this. Again, the actual demonstration of lead in the body, as the "lead line", lead in the feces, or even lead in the urine does not indicate true poisoning. In fact poisoning exists only when to (a) exposure, or (b) demonstrated presence of lead in the body, there is added "the picture of intoxication." In acute cases the intoxication signs are *pallor, digestive disturbances* (colic, nausea, vomiting, constipation, metallic taste), *headache, sleeplessness and weakness* (often followed by wrist drop). Increased blood pressure, slow pulse and *stippled red corpuscles* (at least one per thousand while the colic is on), are usual accompaniments. Lead is usually *not excreted* in severe cases<sup>12</sup> in the urine, but is stored in various organs and becomes a surplus in the blood, with its dangerous consequences for the red corpuscles and the accompanying acute symptoms. Brain symptoms mark severe cases.

In *chronic lead poisoning* there is usually (a) *a bad mouth* (pyorrhea, caries and blackish discolorations with absence of many teeth); (b) *atrophy*, particularly of the most used set of muscles, with accompanying signs of tremors, weakness (where one would expect to find extra strength), muscular inco-ordination, decreased reflexes and perhaps fibrillations; (c) *vascular hypertension*, associated with arterio-sclerosis, cardiac weakness and chronic Bright's disease; (d) *chronic rheumatism* ("poor man's gout"); and (e) emaciation of varying degrees, but this is often absent. Disease of the parotid glands is frequently present if sought for.

## DISPOSITION OF THE LEAD POISONING HAZARD

The practice of public medicine has brought out an excellent journal, *Modern Medicine*, this past year which keeps the busy practitioner informed of this gradually developing field. It is probably the most comprehensive publication dealing with medico-social problems. Another monthly periodical, the *Journal of Industrial Hygiene*, Harvard University, abstracts 240 domestic and foreign publications and in its first year has carried many abstracts and some scientific papers dealing with the lead hazard. *The American Journal of Public Health* and the *Monthly Review* of the United States Department of Labor are additional chief organs dealing with the interest of the great third party—the public—in these production-affairs of industry, capital and labor.

With the advent of the Hughes-Griswold Health Act in Ohio and the state organization under the same now nearly perfected, the Ohio physician may do one or two things with his case of occupational disease: (1) report it on the usual report card for notifiable diseases to his local health commissioner, or (2) report it on the regulation blank directly to the State Department of Health at Columbus. A penalty clause for failure to report was attached by the last Legislature and within the first thirty days reports of occupational diseases have increased ten to twenty-fold, coming principally from industrial physicians, or through their efforts.

The State Industrial Commission is now holding public hearing on a new Code on Ventilation and Sanitation which, when adopted, will greatly extend the control and supervision of lead poisoning as well as other poisons, dusts, etc. The Department of Factory Inspection will take on the administration of this Code.

Mention should be made of a bill for *compensation of occupational diseases*, sponsored by organized labor, which may be passed by the next Legislature. Should it become a law it will offer some solution of this question, but at the same time, I fear, will inaugurate an endless amount of disputes and case-hearings on the merits of various claims for compensation. At the same time I do not fear much expense will be involved, as occupational diseases, being usually primary afflictions and usually over as soon as the employe ceases the work, or a few days or weeks thereafter, the required waiting period of a week or so will annul much of the cash benefit. This has been the experience in California<sup>13</sup> where such a law now exists, and Massachusetts' experience is similar<sup>14</sup>. On the other hand, Great Britain has been astounded at the amount of industrial sickness, especially tuberculosis, since the creation of the National Sickness Insurance Act (1911). Personally I do not look for much advance in controlling or preventing lead poisoning and similar occupational diseases until all in-

dustrial sickness is compensated in some way or other, similar to industrial accidents.

More specific means of controlling lead poisoning causes *physical examinations* to be mentioned. These are now required in Ohio in plants manufacturing certain lead compounds and should be extended to all other workers exposed to lead. Illinois' occupational disease law<sup>14</sup> extends physical examinations and the book-keeping of industrial sickness to a host of plants and industries which report monthly.

There seems to be no disposition to *drop the use of white and red lead* in this country, nor to substitute less soluble forms and other substances<sup>15</sup>.

The Oliver-Clague *electrolytic bath*<sup>16</sup> for removing lead from the person of a lead-poisoned individual seems to have received a death blow from the independent investigations of Goadby<sup>17</sup> and Oxley<sup>18</sup> in England which, indeed, were reported as long ago as 1914. It would appear that commercial interests are behind the continued exploiting of this "two-bath" electrolytic de-leading method which has no basis in science, although may have some psychical value upon an ignorant lead poisoned foreigner who, on stepping into the bath, feels the electric current's giving him "funny feelings" as an electric current is prone to do.

## PREVENTION AND TREATMENT

A very promising piece of work in *keeping down lead dust* so as to prevent its inhalation is that of Dr. W. H. Wood of the Willard Storage Battery Company, Cleveland, Ohio<sup>19</sup>. In spite of the most elaborate precautions in equipment, cleanliness and sanitation it was found that breathing lead dust would produce lead poisoning just the same. The mere passing to and fro of men and trucks raised dust. After much experimenting Dr. Wood found that a *solution of magnesium sulphate* would change lead dust into a non-dusty state and permanently hold it in that condition. This cheap substance was found not to be injurious to batteries, capable of easy cleaning up, and acting as a flux when it reached the smelter in the re-claiming process. It is sprinkled on floors and benches and fixes the dust.

The specific or *drug treatment* of the lead poisoned individual illustrates practical pharmacology and is as follows<sup>20</sup>:

(1) Atropin paralyzes the vagus endings in the intestine abolishing the intestinal spasm, and with it a non-irritant evacuant, preferably saline, should be used to empty the bowel.

(2) An excessively high blood pressure independent of that caused by the mechanical pressure on the splanchnic vessels is apparently concerned in the colic, and a vasodilator, such as amyl nitrite frequently affords relief.

(3) Opium may be required to relieve intense pain.

(4) Potassium iodid is used to hasten elimina-



tion of the metal, but it has little effect on the secretion of the metal stored in the body; it may lower blood pressure and assist the action of diuretics.

(5) Diuretics are used to hasten elimination, but also have little effect on the elimination of the metal stored in the body.

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## Eye Injuries and the Workmen's Compensation Law\*

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**Editor's Note.**—Dr. Brown maintains that the attitude of the medical referee in eye compensation cases should be one in which the claimant should be given the benefit of the doubt, either as to the possible relationship of the injury to his defective vision, or as to the degree of defective vision, if genuine doubt exists. While it is right and proper to discover falsity in the claims brought before the Board, yet it should not be the province of the referee to ignore the possibility of the justness of the claim in the face of doubts on his part as to its correctness. It would seem one of the positive requirements of the future that all large industrial establishments, in which eye injuries are frequent, should require every applicant for employment to have the vision of each eye tested separately and a record thereof made to furnish information in case of later claims for physical damages. Practically all juries in Common Pleas Courts make an award favorable to the plaintiff when a claimant decides to carry his case into court after rejection of compensation by the Board. Malingerers are few and may be readily suspected and exposed. The great lessons still to be learned are the prevention of eye injuries and the prevention of infection after their occurrence.

THE writer has been called upon since 1915 to examine and render opinion as to the damage done the organ of vision in a number of cases coming as claimants before the Industrial Commission of Ohio under the workmen's compensation law. It is natural that one should come to give serious consideration to the questions raised by these examinations.

#### ATTITUDE OF THE PRACTITIONER TOWARD HIS PATIENT AND THE COMMISSION

The greater number of physicians are identified with the primary care of industrial accident cases, the injured person coming under their care for medical and surgical attention. Later when the case files application with the Industrial Commission for compensation for medical and surgical, hospital and similar expenses, for allowance for loss of time or permanent disability, the physician has often come to feel a personal responsibility in the case. He sometimes interprets this by giving the prosecution of a claim all the favorable testimony that it is in his power to give, and by not offering any that would be prejudicial to the interests of the claimant in securing the fullest allowance possible for him.

The physician in this case occupies a position similar to the medical witness in court in behalf of a plaintiff, but with no interested defendant, represented by counsel, to cross-examine or break down extravagant or misleading testimony. For, be it said, while it is the duty of the commission through its medical staff and board of award to defend the state against false, groundless, or excessive claims, this board looks upon the physicians of the state as their colleagues in performing their duties; they are not inclined to discredit the medical testimony in these cases, and it is only where questions of doubt arise from the evidence, as to the cause of the disability, its exact nature, or its amount and permanency, that then the board calls for a medical review of the case. Now, some one is called in who has had no previous contact with the case or its management; and who, if further medical or surgical aid is called for, will probably not be called upon to furnish same. I have used the term *referee* to express the functions of such an examiner. Under this plan claimants may be asked to report to special examiners in Cleveland, Youngstown, Akron, Toledo, Dayton, Cincinnati, Steubenville, Columbus, and possibly other places.

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

#### WORK OF THE MEDICAL REFEREE

Occasionally I have had a complete transcript

of all the medical testimony of cases of eye injury submitted to me with a request for an opinion on particular phases of such cases. In a few others I have had not only the testimony but also the claimant for examination as well in giving the opinion, but in the great number of cases the claimant is asked to report for an examination and no information bearing on the case is given beyond the brief statement such as "eye struck by a chip of coal"; "suffered a penetrating wound of the eye"; "head injured by fall, damaging sight of right eye", etc. "You are requested to make a careful examination of the eyes and report upon their condition."

Experience in my hospital days in making examinations in connection with pension claims early suggested to me the division of such reports so as to bring them under three headings: 1. History. 2. Facts elicited by examination. 3. Opinion, or interpretation of the facts brought out under 2, and as influenced in the minds of the examiner by 1. *In other words, the examiner, while asked for his opinion, should not mix this in with the statements of the facts ascertained in his examination, but should give this in a separate paragraph where it will be known to be opinion only. The history, in brief form, is necessary as a part of the report to show the Commission the representations the claimant made when submitting for his examinations, that it may see if this corresponds with the description of the accident already on record, and also to be of aid to the examiner if he is called upon later to answer specific questions bearing on his examination and report.*

#### ATTITUDE OF REFEREE

The workmen's compensation law is not in the stage of argument, unless as to modifications. It is a fact of law, and because of its nature, the medical profession is largely responsible for the honesty and correctness of its administration. It goes without saying that the medical staff of the Commission has no interest counter to its just administration. As citizens of Ohio every physician who comes in contact with a case handled or examined under the provisions of this law should feel that his first obligation is to the commonwealth which has legalized him as a practitioner, and see that nothing arises from his caring for such a case that would stultify or set aside this underlying obligation. The greatest good for us all as citizens, and for our state, can only come from a conscientious attitude toward these cases. For a physician to aid in the denial of a just claim against the compensation fund is as wrong as the attempt to secure unmerited awards. *The attitude of the referee in these cases should be one in which the claimant should be given the benefit of a doubt, either as to the possible relationship of the injury to his defective vision, or as to the degree of defective vision, if genuine doubt exists. While it is right*

*and proper to discover falsity in the claims brought before the Board, yet it should not be the province of the referee to ignore the possibility of the justness of the claim in the face of doubts on his part as to its correctness.*

#### TYPES OF CASES IN DISPUTE

A claimant may have a traumatic or other lesion of the eye affecting its integrity, making claim that this trouble has arisen in the course of his employment, although it did not so occur. A number of such cases have been noted among those examined where the probabilities pointed to this being the case. Where there has been a prompt report of the accident to the foreman or some one connected with the company employing him, there has, as a rule, been very little difficulty in determining the facts bearing on these cases. The other type of case is where a defective eye has been present for some time preceding the injury, in which some minor damage has been done it. In the face of such injuries it often happens that the claimant will come before the examiner attributing all the damage to vision to the recent injury. This represents a most important type of case. We all know how many people are going about today, doing their work, with one eye practically blind. Many of these have no outward indications of the defective vision. In the ranks of unskilled labor there are many such individuals and it is unfortunately true that this type is easily influenced to make exaggerated claims when any injury to the eyes occurs, and that such defective vision antedated the injury is a fact hard to establish in the great majority of cases, and the average person who sits in judgment over such a case will always be inclined to give the claimant the benefit of a doubt if there is an actual lowering or destruction of vision in the eye.

On the other hand, it is a matter of importance that this law be justly administered and that its funds be not raided by false claims. *It would seem one of the positive requirements of the future that all large industrial establishments in which eye injuries are frequent should require every applicant for employment to have the vision of each eye tested separately and a record thereof made to furnish information in case of later claims for physical damages.*

Another type, which does not properly come under the head of malingering but which is closely related to it, is that in which a precedent defect or low-grade disease of the eye, scarcely noticed, suddenly becomes intensified or acute and the vision markedly lowered, perhaps permanently. Such cases are constantly arising in all classes of employes in the state. It is very natural that a number of these should attribute the defect of vision to some minor accident in the time shortly preceding that when the defect was first noticed. There is scarcely a laborer in large industrial establishments that cannot recall



having gotten sand, dust, or some small particle in his eyes some time preceding, or who has not been exposed to heat, bright light, or has not suffered some bodily bruises.

#### ILLUSTRATIVE CASES

*Detached Retina:*—One of the most interesting cases that has come under the attention of the writer was that in which detachment of the retina was found. Testimony showed that this man was employed in a boiler room; that one day during the summer time when the outside temperature was high, and necessarily that in the boiler room was uncomfortable, he claimed to have noticed for the first time a blur of vision in one eye. Almost immediately he was examined by a competent oculist and a detachment of the retina was found, which detachment, in spite of treatment, has remained and increased until practically total blindness of the eye resulted.

In view of the etiology of retinal detachment, the award board of the Commission declined to regard the case as one of injury resulting from his employment, holding that there must have been a precedent latent disease of the eye predisposing the individual to his detachment.

*Under the law this claimant brought suit in the common pleas court and was awarded compensation based on the total loss of vision of one eye.*

The writer has reviewed the testimony in this case, and while his views were expressed in the above note as to the attitude of the Commission, yet there was testimony by competent oculists to the effect that straining in lifting heavy objects would cause increased blood pressure in the eye and cause the accumulation of secretion between the retina and choroid, resulting in a pushing of the retina away from its normal attachments. The writer is unable to see how, with a normal vitreous body and a normal intra-ocular tension, such physical effort would tend to produce detachment such as existed in this case. The attitude of the jury in this case is typical of the attitude in all the cases in which the writer has been interested to watch the outcome. It seems to be expressed as follows: "Here is a poor unfortunate fellow who has lost in part, or wholly, the vision of an eye. Here is a large fund accumulated by the State for the purpose of taking care of unfortunates. Why deny this man an appropriation which is really meant to cover this class of cases? Give him a reasonable amount." *In other words practically all juries in common pleas courts make an award favorable to the plaintiff when a claimant decides to carry his case into court after rejection by the Board.*

*Gonorrheal Infection:*—Another case where an award was denied by the Commission was taken into court and a jury gave damage based upon complete loss of one eye. The testimony showed the claimant developed an inflammation of the

eye, which proved to be gonorrheal. Three days after the appearance of this disease, while in the hospital, he mentioned for the first time that before the development of the trouble, when in the stable of the company where he was employed, he had a horse tail switched across his face, giving him pain in the inflamed eye. It was the contention of his claim that some one suffering from gonorrhea had left infection from his hands on the horse's tail and that this had been transferred to his eye when the horse switched his tail across his face. My recollection is that the jury estimated the swish of this tail as being worth \$1,800.00.

*Other Causes:*—Other examinations have revealed claims brought before the board based on loss of vision due to: (a) interstitial keratitis; (b) trachoma; (c) senile cataract; (d) glaucoma; (e) non-traumatic haemorrhage into the vitreous; (f) uveitis; (g) optic atrophy; (h) hyperopia, and (i) arteriosclerosis and retinal haemorrhage and other causes not constituting injury or occupational disease.

*Optic Atrophy:*—A most interesting case was one where a workman had fallen from a ladder, suffering a general physical disability for several weeks. A year later he complained of a visual defect and brought a claim before the board, which claim, on special examination, was denied. The writer saw this applicant after contradictory reports had been filed, some based on earlier examinations denying the existence of any lesion that would cause defective vision. The disease was more advanced when the writer saw him and found well advanced optic atrophy, with bitemporal hemiopia, and X-ray showing marked change in the region of the hypophysis. A neurologist was of the opinion that the hypophyseal disease could be accounted for by the accident and injury to the head.

#### TESTS FOR MALINGERING

*Tests for malingering are called for in but few cases. The great majority of the claimants give truthful cooperation to the examiner. The few that are not of this class give grounds for suspicion before the examination has proceeded far and give opportunities to the examiner to trap them when untruthful. Some of these respond properly when it is suggested to them that the examination is made in their behalf and that it is highly essential that their statements as to behavior and vision of the eye should be in keeping with the physical findings; otherwise the examiner would have to report contradictions between examination and claims which are always prejudicial to the claimant's own interests. By assuring them of the examiner's desire to get at the actual facts for his benefit he is more apt to cooperate. Among less intelligent claimants, and frequently among non-English speaking laborers, claims absolutely out of proportion to the condition of the eye have been met with, and*

such cases frequently adhere to the original claim—"see nothing." One man, when remonstrated with for his attitude, repeated, "couldn't see your two fingers when you held them out."

A feature of this work, that was noted in the earlier cases more than of late, was the apparently misleading testimony of physicians. For instance, in one of these, the physician accompanied the applicant. When the characteristic lesions of active trachoma were called to his attention and an insistent quiz was made of the claimant, it was finally admitted that an inflammatory trouble had been present long before the very minor injury occurred, to which, in the evidence filed with the claim, the physician had attributed entirely the very defective vision.

#### REMUNERATION AND AWARDS

As to the monetary side of the question, the writer has not paid attention to those phases of the case. He believes, in a general way, that it may be stated that work done for Industrial Commission cases does not give as good re-

has been small. The fractions by which the oculist records visual acuity as obtained by reading the letters of the ordinary test chart do not express the fractional value of visual power in an economic sense. It is well known that many individuals with normal eyes and little if any ametropia may not read better than 20/30 by chart, yet such individuals suffer no inconvenience in any way from such vision. The appended table, adopted by the Chicago Ophthalmological Society in November, 1919, is taken to express the present valuation of visual loss in one eye\*.

The State Board *i. e.*, the state law, gives no compensation on a permanent disability of less than 25 per cent. loss of vision in one eye, allowance being made only for temporary disability; the section reading "For permanent partial loss of sight of an eye 66 2/3 per cent. of the average weekly wages for such portion of one hundred weeks as the Commission may, in each case, determine, based upon the percentage of vision ac-

CHART FOR EVALUATING VISUAL LOSS IN ONE EYE

20/20	indicates	100 per cent. of visual efficiency and no	loss of vision
20/30	indicates	94.5 per cent. of visual efficiency and 5.5 per cent.	loss of vision
20/40	indicates	89.0 per cent. of visual efficiency and 11.0 per cent.	loss of vision
20/50	indicates	83.5 per cent. of visual efficiency and 16.5 per cent.	loss of vision
20/60	indicates	78.0 per cent. of visual efficiency and 22.0 per cent.	loss of vision
20/70	indicates	72.5 per cent. of visual efficiency and 27.5 per cent.	loss of vision
20/80	indicates	67.0 per cent. of visual efficiency and 33.0 per cent.	loss of vision
20/100	indicates	56.0 per cent. of visual efficiency and 44.0 per cent.	loss of vision
20/120	indicates	41.0 per cent. of visual efficiency and 59.0 per cent.	loss of vision
20/150	indicates	28.5 per cent. of visual efficiency and 71.5 per cent.	loss of vision
20/170	indicates	18.5 per cent. of visual efficiency and 81.5 per cent.	loss of vision
20/200	indicates	10.0 per cent. of visual efficiency and 90.0 per cent.	loss of vision

muneration as the same class of work among private patients. On the other hand, the question arises as to whether the fees paid under this law are in proper proportion to, and commensurate with, the fees and salaries paid by the state in various other activities. Our inclination is to believe that they are.

As to the awards for damages, it would seem to the writer from a study of the awards made in cases coming under his observation, which study has been made in connection with this paper and for no other purpose, that the awards have been very conservative. In other words, granting the justness of the claims and the responsibility of the state, there have been few excessive awards. In fact, it has seemed from a hasty going over of these, that in many cases the claimant might well have been given a slightly greater allowance, to be in keeping with those set forth in standard estimates of the economic value of vision.

In some cases where the fellow eye, the one not concerned in the claim made before the Commission, has been the seat of defective vision before the injury, it would seem that the allowance

tually lost as a result of the casualty, but in no case shall an award be made for less than a 25 per cent. loss of vision." It is noted from the appended table and likewise by the action of the Board, that any person whose vision is below 20/200, *i. e.*, whose visual power is below 10 per cent., is industrially blind.

The loss of one eye lessens the reserve against possibilities of the future by one half. Now the loss of one eye only is ordinarily valued at from 1/8 to 1/2 the economic value of both. Suppose such an award is made, and later in life the remaining eye is lost through disease or non-industrial causes, in what position is this man who by the loss of the first eye by injury is now placed in the class of permanently totally disabled, it being considered that total loss of vision in both eyes is comparable to loss of life in an industrial sense. Again, is there any difference in the visual worth of an eye that has its vision reduced to say 20/100 by (a) corneal opacity, and (b) trouble of the fundus, whether of optic

\*This table is not one adopted by the Industrial Commission of Ohio.—Author.



nerve, retinal, or choroidal origin. It has impressed the writer that an eye whose vision was reduced to 20/100 by fundus trouble was not nearly so useful an organ of vision as one whose vision of 20/100 may have been brought about by corneal opacities. In the latter case it has seemed that vision at short range was relatively better.

The expense to the state in 135 cases of eye injury has been:

(a) compensation allowed,

\$58,101.37+3 P T Y=\$76,101.37

(b) for medical service \$9,514.53.

Average compensation, 135 cases=\$563.71.

Average medical service=\$70.40.

This does not include any part of the overhead in the administration of the law. Since August, 1919, when the practice was established of serially numbering the cases referred for special ophthalmologic examination and report, there have been up to the end of May, 1920, 834 such cases referred to the various referees.

#### THE NECESSITY OF PREVENTING INFECTION AFTER INDUSTRIAL ACCIDENTS

*Looking to the true economic side of the situation revealed by these cases it would seem that the greatest lesson is for increased measures of prevention of infection after industrial accidents. Unfortunately, a number of the most virulent cases of damaged vision, and a number of cases in which the eye has been enucleated, were those in which infection took place after trivial corneal injury. In a number of these the claimant utterly disregarded the fact that he had an eye injury and went on with his work three, four, seven or ten days, doing absolutely nothing in the way of treatment, except for the use of home remedies, until the eye was hopelessly involved in an infectious process which later destroyed vision. In other cases the records show that the claimant consulted the company or some other physician immediately after the injury, that a small superficial foreign body was removed, or some abrasion noted, the claimant told that the injury was of no moment, and to return to work, the infection taking place later, and not receiving attention until damage was irrevocable. The number of this type of cases among coal miners is large, but it is liable to be met with in any case of superficial injury of the anterior corneal segment of the globe.*

The allowance for loss of vision and for medical service in these cases far outruns the small expense that would be attendant upon a rigid system in which every employe would be required to report to a physician immediately following any injury to the eye, and to keep under his observation not less than three days following the injury or the removal of a small foreign body; the eye during this time to receive proper disinfectant and protective treatment. The financial loss where vision is compromised is not the most

serious question in this but the economic loss from the incapacity of the workman is equally important. What the world now needs is a full day's work six days a week from as many able-bodied workmen as it can call upon.

#### PROPHYLAXIS

In the matter of prophylaxis and first aid, the larger industrial establishments of the state, particularly those located in the cities, have taken admirable steps to minimize the danger to vision following minor injuries. A suitable first aid room in charge of a competent nurse, and often with a physician, gives service to these cases of injury. Infection may take place primarily from a foreign body, but the great number of these cases of corneal injury are infected following accident by the use of handkerchieves, cloths, tooth picks, matches, knives and other objects that may be brought in contact with the eye, and perhaps most of all with the finger. Where serious damage has been done the case should properly come under the observation of some one competent to care for such injuries of the eye. In the minor abrasions, or following the removal of superficial foreign bodies, it would not be so necessary to have the services of an oculist if the nurse and physician would in every case follow a routine meant to prevent possible infection, namely, careful flushing of the conjunctival sac with boracic solution, the instillation of twenty-five per cent. argyrol or silvol solution, the use of yellow oxide, bichloride or boracic ointment, and the application of a protective dressing, such protective dressing not to be removed by the person suffering the injury, but to stay in place until seen by the nurse or physician at the next appointed time, whether twelve hours of twenty-four hours, but not later than twenty-four hours. The repetition of such cleansing and treatment and use of the protective dressing until the case begins to cicatrize will not always interfere with the party continuing to work, though in cases of doubt it is much better for the man to lay off and thus give a better opportunity for repairs, but the loss of say three days' time and the expense of the primary dressings is as nothing compared with the economic loss if infection occurs and the resultant opacification of the cornea occurs in the pupillary area of the cornea. *It would seem entirely proper that a rule be established in the cases coming under the purview of the workmen's compensation law that every man suffering from the entrance of a foreign body into the conjunctival sac, or against the anterior segment of the globe, suffering any abrasion of the cornea, or noticing any unnatural discharge or inflammation about his eye, be required to report promptly to his foreman, or to the head of the establishment by which he is employed, stating the occurrence of such injury, or the fact of such inflammation, and that the employing company be required to see that the case has im-*

*mediate proper attention for diagnosis and whatever is needed; otherwise that the claimant will not stand in a favorable light before the Board in the claims arising under his case.*

#### DELAYED SETTLEMENTS

A delayed settlement award is advisable in not a few cases and an examiner should so report when such a course seems necessary to give positiveness to its basis. Many eyes that shortly after an injury give promise of useful vision later deteriorate. This is noted where the magnet has been used for removal of foreign bodies from the interior of the eye; where cyclitis has been present; where optic atrophy follows choroidal rupture or an optic neuritis. On the other hand, many cases show late improvement—corneal deposits lessen and smooth, vitreous haemorrhage and exudates are absorbed, traumatic cataracts are removed or more completely absorbed. The vision has been found more completely restored in some of these cases after six months and a year than seemed at all probable at the time the first report was made.

#### CONCLUSIONS

Some one asked what points it was expected to bring out or prove in this paper. The writer has had in mind only this: *First*, as physicians it should be our first duty in all industrial cases to serve our commonwealth to the best of our ability; to aid in the administration of a law which while beneficent, offers a temptation to mendicants and imposters, by putting our professional services and medical testimony on a plane that will not serve selfish ends either for ourselves or a claimant. *Second*: to demonstrate the economy of those regulations which insure the most intelligent and specialized care of all eye injuries from the beginning, thereby eliminating infection, which is one of the most destructive elements in the dangers to vision following injury.

The paper has not dealt with such important questions as the rules and regulations enforced in industrial establishments, especially the iron, steel, rubber, electric and mining industries looking to the prevention of eye injuries.

370 EAST TOWN STREET.

## Well-Driller's Palsy: A Case Report\*

Frank W. Langdon, M. D., Cincinnati

**Editor's Note.**—In his interesting case report Dr. Langdon details a condition that is unique. Considering the character of the well-digger's work it is surprising that occupational palsy is not more frequently met with. Once the condition has been diagnosed it is very important for the attending physician to realize what is and is not the proper line of treatment.

ON January 26th, 1920, the patient of this report was referred to me by Dr. W. J. Davidson, of Parkersburg, W. Va.

He was Mr. O. A. C.; aged 45; an American and bachelor, who had been an oil and gas-well driller for 22 years, excepting for one interval of nine months in his 38th year, when disabled by fracture of left ankle; and another of four months in his 43rd year, while recovering from an operation for appendicitis.

**Complaint:**—Weakness, "sore" feeling and some tenderness on pressure in muscles of *right fore-arm, upper arm and shoulder*, extending at times to back of neck and occiput. Onset was indefinite, not sudden or rapid. Symptoms were first noted about 10 weeks previous to this date. Intensity increased gradually, until he felt unable to continue his work and consulted Dr. Davidson.

A well-driller, as many of you are aware, is a skilled artisan, who manually regulates the mechanism which controls the length and lateral variations of the cable which carries the "drill." Standing upon a wooden platform, elevated a few feet above the margin of the "well," he

operates a horizontal lever the center of which engages a screw thread on a perpendicular steel rod. From this steel rod the cable with its drill are suspended by a clamp through which the cable may be "paid out," as called for by the depth of well.

His *main movements* consist in "*pulling*" with the *right* hand and "*pushing*" with the *left*, thus screwing the lever up and letting the clamp or rod down (lengthening the cable) so that the drill may "strike bottom" in successive blows, which are produced by operation of a "walking beam" device. *Accessory movements* are those which regulate the rod movements so as to keep the cable (and drill) "centered" properly. As the underground portion of the cable with drill, may weight 1000 to 5000 pounds, these "adjusting" movements must be complicated as well as strenuous. The position of well-driller therefore is one calling for much tact and nicety of judgment—as well as more than ordinary muscular power and endurance, in order to continue these processes for from 8 to 14 hours daily.

(This description is based entirely on the statements of the patient and not on personal observation of the writer; consequently, inaccuracies of detail are to be expected.)

\*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.



## CLINICAL RECORD

*Family History:*—Parents lived to 70 years. Patient is the third of five children, all living. One, a woman, "neurasthenic" for two years at 35, following various operations.

*Personal History:*—"Malaria" at 19; "Typhoid" at 26; left ankle fractured at 38; Appendicitis operation at 43. No history or probability of Syphilis. Denies any venereal disease. Tobacco never used. Alcohol very seldom and then moderately. "Never intoxicated; Never drank as much as a gallon of liquor or a case of beer in my whole life." No evidence of alcoholism. Occupation has entailed considerable exposure to cold and wet, in addition to strenuous muscular exertion.

*Present State:*—Man of excellent development; formerly of athletic inclinations and accomplishments—"throwing hammer," etc. Height 6 feet, 1 inch; weight 176 with a loss of 14 pounds in past six weeks.

*Circulatory System:*—Heart; first sound at apex slightly roughened and prolonged. (This was not found at second examination, May 4th, 1920.) Pulse; 60, regular, tension moderate. (Rate 84 on May 4, 1920, date of second visit.)

*Respiratory System* negative, except for his statement of Chronic Laryngitis, not evident in voice.

*Digestive System:*—No symptoms found.

*Urinary System:*—Urine S. G. 1025, normal as to color and content.

*Generative System:*—No complaints.

*Locomotory System:*—Used all limbs freely for ordinary purposes. No defect of gait or posture at this visit, (January 26, 1920), but at second visit, (May 4, 1920), walks with a limp, owing to a partially recovered fracture of right fibula sustained on April 13th.

*Nervous System:*—Sleeps well. Emotionally well balanced. Mentally: prompt and correct in perception; logical in thought processes; general intelligence, conduct and language excellent. No defect of articulation.

*Cranial Nerves:* I. Not tested. (No complaint from patient.) II. Eye grounds "Normal", (Dr. Victor Ray.) III-IV-VI. Pupils respond normally. Ocular movements good. V. No defects noted. VII. No facial palsy or lack of control. VIII. Hearing good for ordinary purposes. IX. No defect noted. X. See Pulse 60. (May 4th increased to 84.) XI. Some tenderness in right Trapezius muscle. No paralysis detected. XII. Tongue protrudes in median line. No atrophy or fibrillation.

*Trunk and Extremities:*—Motor: Gait and station good. No Romberg sign. Co-ordination upper and lower extremities good. Power: Grasp (Narragansett Dynamometer) 1920, Jan. 26, right hand, 33-46-36. Left hand, 60-61-59.

1920, May 4, right hand, 62-58-55. Left hand, 62-56-52. Patient is right-handed.

*Sensory:*—Subjective sense of "weakness" and "queer feeling" sometimes described as "numbness" in entire right upper extremity. No anaesthesia of tact, pain or posture sense.

*Reflexes:*—Knee-jerks: moderately plus and equal. Elbow, wrist, and finger extension reflexes active and equal.

*Vaso-Motor:*—No symptoms observed.

*Trophic:*—No muscular wasting or fibrillation.

*Summary:*—No evidence found of organic lesion of Nervous System.

*Diagnosis:*—Occupation Neurosis of monoplegic distribution affecting entire right upper extremity, and due to over-use of limb in specialized movements incident to his occupation.

*Treatment Advised:*—Prolonged rest from present occupation. Other muscular and outdoor work is permissible, if not requiring "well-drilling" movements. Attention to diet and general health.

## REPORT ON CONDITION

The following note was written at his request, for the information of his employers:

"To Whom it may Concern:

"I hereby certify that Mr. A. O. C.—— has a considerable loss of power, (about 50 per cent), with localized pains on use in right shoulder, upper arm, forearm and hand. In my opinion, these conditions are due to prolonged use of that limb, in certain strenuous and complicated movements which are necessary in his occupation of "well-driller." Immediate and prolonged rest is necessary to favor recovery. He may follow any occupation that does not require those movements, or much muscular work and exposure. He should see his physician frequently and have all necessary attention to his general health. Caution:—No rubbing or massage or other mechanical or electrical treatment should be allowed. They can do no good and may do much harm."

Respectfully yours,

(Signed) \_\_\_\_\_

After a rest of one month, the pains, soreness and weakness in the affected arm gradually disappeared and he secured a position as "yard foreman" in an industrial plant. Here he worked actively out of doors for six days a week, ten hours daily, with entire comfort for six weeks. Unfortunately, he then sustained a fracture of his right fibula, which necessitated another rest period.

During this period he paid me his second visit, (May 4th) some notes on which are embodied in the preceding examination record for comparison purposes. It suffices to state here that his general health is excellent, he has no pains, or discomfort in affected arm and hand, and the grasping power is practically equal and normal in the

two hands. (See record of examination under "Nervous System.")

So far as the writer is aware this syndrome has not been previously recorded, though it ap-

pears reasonable to assume that this is because of lack of observation rather than non-occurrence.

4003 ROSE HILL AVE.

## The Group Industrial Surgical Hospital\*

A. Moncrieff Carr, M. D., Philadelphia

United States Public Health Service

**Editor's Note.**—At the present time the great mass of the industrially injured are treated in general hospitals where no specialized care is given them. The attending surgeons, internes and nurses frequently do not appreciate the problem of the injured worker and in some instances the industrial case is viewed by the hospital as a nuisance. A reasonable and practical solution of this problem is the organization of a group industrial hospital with outlying dressing or emergency stations and a cooperative and follow-up reconstruction and rehabilitation service with a selected and trained personnel. In connection with the planning of such a hospital the importance of a survey of the industrial group and its types of accidents, infections and diseases must be emphasized, as well as its outlying emergency needs. Aside from the vital element of personnel the final detailed plans of a group industrial surgical hospital must be based on the latest knowledge of all departments in the order of their importance and logical sequence, from the admission of the patient as "a case" to his departure as a well man.

### GENERAL CONSIDERATIONS

**B**Y a group industrial hospital is meant a hospital serving a large or small group of industries, preferably of the same type. Few single industries can afford to maintain establishments and employ the best surgical personnel and necessary skilled help required for adequate service. So we have a few larger industries fairly well served, but innumerable smaller industries, not being able to secure the best surgical skill or hospital care because of expense of maintenance, have to take what they can get, to the detriment of the injured.

At present the great mass of the injured are treated in general hospitals and no special care is given. The injured man is seen by the "visiting" or by the plant physician, and administered to by the intern, whose treatment is very largely that of experimentation. Often the visiting surgeon is a general surgeon and knows little of modern bone surgery or other industrial surgery, and nothing at all of industrial relations. The nurses are pupils and do not appreciate the problem of the injured worker. From a personal experience, as chief resident in a hospital of a large manufacturing center, I know that it was a common thing among the staff and nurses to regard the industrial case as a nuisance.

A reasonable and practical solution of the problem would be a central hospital, with outlying dressing or emergency stations, organized for prompt, efficient service, serving a group of industries, emergency and surgical; cooperative and follow-up, reconstruction and rehabilitation services, with a selected, trained personnel, developed on a unit system for the special needs of the group, should be features of the hospital.

In connection with the planning of a central hospital, the importance of a survey of the industrial group should be emphasized. Types of

accidents should be estimated, comparison made with other groups, so that an intelligent plan may be perfected. For instance, a survey of New York's lower west side would reveal an immense amount of shipping, which spells serious accidents and infections; the congestion of traffic points to the need of establishing a central "base hospital" with outlying "dressing stations" on the "front line."

Before the various departments of the hospital are taken up in detail, it is well to call attention to the keynote of success in the salvation of the industrial cripple. This may be summed up in the term "personnel." Readers will perhaps tire of the seemingly unnecessary description of the requirements of the chiefs of the departments, herein recorded, but, heretofore, too little attention has been paid to the personal characteristics essential in the specialty of industrial surgery.

### PERSONNEL

The chief surgeon is first an industrial surgeon, and preferably, one who has had experience in modern war surgery which will enable him fully to appreciate aftercare, aside from the actual surgery done. As the military commander studies the daily life of the soldier, so should the industrial surgeon be thoroughly conversant with industry. It is strongly urged that the man selected for the key position of chief surgeon be a socially minded young man of executive ability, whose reputation as a surgeon can be proved by his record of successful cases. His assistants should be chosen as much for their ability to cooperate as for their natural talent and experience.

The industrial nurse should be a graduate, and not a probationer or even a pupil; neither of the latter has had sufficient experience either of life or industrial work to appreciate the workers' problem, or to realize its importance. Some will

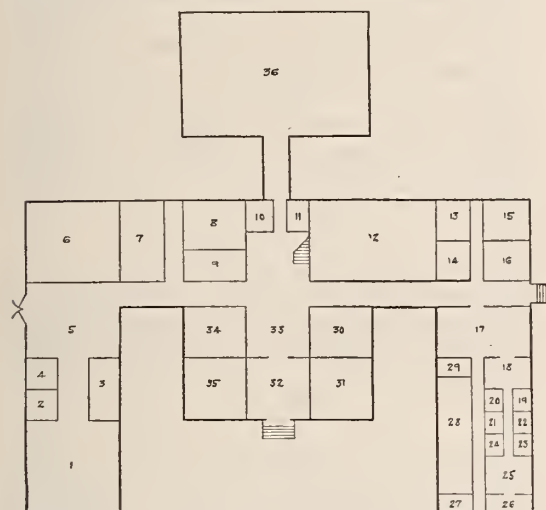
\*Courtesy of Modern Medicine.



immediately say that graduates will not do ward work. Yes they will, if properly paid!

Lastly comes the question of salaries, and one of the most uncertain. It is fair, however, to say that salaries paid to fulltime men should compare favorably with other business. A surgeon who nets \$15,000 a year in practice could not be asked to accept less as chief surgeon; his assistants would be paid according to ability, experience, and responsibility. Nurses' salaries should be proportionate to that paid in private work, modified by the fact that the employment is steady.

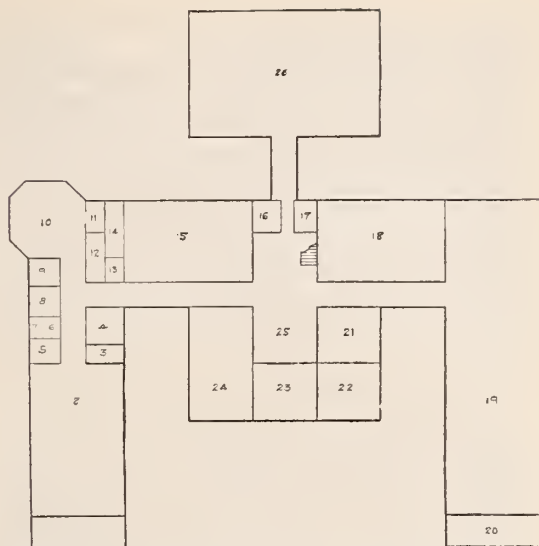
It is the purpose of the following plans and accompanying diagrams to suggest a workable basis which can be modified, or added to, accord-



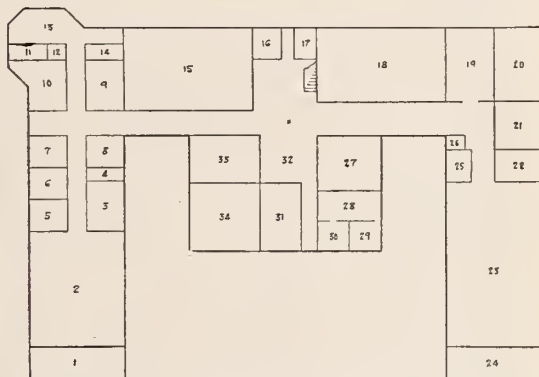
First Floor, Group Industrial Surgical Hospital. 1. Disposition or observation ward. 2. Ward toilet and bath. 3. Patients' property. 4. Admission baths. 5. Admitting room. 6. Dressing room and records. 7. Apparatus repair and splint shop. 8. Ward and operating room supplies. 9. Pharmacy. 10. Bed elevator. 11. Passenger elevator. 12. Offices for chief of follow-up and three assistants. 13. Genito-urinary clinic. 14. Ear, nose and throat clinic. 15. Dental clinic. 16. Eye clinic. 17. Waiting room. 18. History room. 19-24. Dressing room (men's). 25. Examining physician. 26. Laboratory. 27 and 29. Toilets. 28. Women's examining department. 30 and 34. Clerical force. 31. Conference room. 35. Record room. 32. Information and telephone. 33. Waiting room. 36. Engine room and kitchen.

ing to the community's needs. However, the need of a change from the usual type of general hospital, as now established, to one that more nearly fits the need of an industrial group, is indicated. What is omitted in the written description, such as office equipment and arrangement, is indicated in the diagrams; detail is left to those concerned in the final perfecting of such a hospital, the plans presented here being suggestive only. The departments are taken up in order of their importance and logical sequence, from the admission of the patient as "a case" to his departure as a well man.

The receiving department is the reception room of the injured man's home for the period of his disability. The majority of receiving rooms, even in the modern hospitals, have a gloomy and depressing atmosphere, aside from the architec-



Second Floor, Group Industrial Surgical Hospital. 1. Solarium and smoking room. 2. Clean surgical ward for 12 beds. 3. Nurses records, etc. 4. Dining and serving room. 5. Ward toilet. 6. Linen room. 7. Laboratory nook. 8. Plaster room. 9. Anesthetizing room. 10. Operating room with automatic sliding doors. 11. Scrub-up. 12. Sterilizing. 13 and 14. Surgeons' smoking and dressing room. 15. X-ray and laboratory departments. 16 and 17. Elevators. 18. Offices of chief nurse and assistants and nurses' rest room. 19. Infected ward, homologous to clean ward. 20. Solarium. 21. Reference library and conference room. 22. Offices of chief surgeon and assistants. 23. Office of superintendent. 24. Case records, clerical force and bookkeeping. 25. Waiting room. 26. Dining rooms for all personnel.



Third Floor, Group Industrial Surgical Hospital. 1. Solarium and smoking room. 2. Medical ward for eight beds. 3. Ward dining and serving room. 4. Linen closet. 5. Ward toilet. 6. Nurses' records, etc. 7 and 8. Quiet rooms. 9 and 10. Semi-private rooms. 11 and 14. Private baths. 12. Linen closet. 13. Sun parlor and smoking room. 15. Residents' quarters. 16 and 17. Elevators. 18. Gymnasium, machines, electrical apparatus. 19. Recreation and smoking room. 20. Vocational work. 21. Dining and serving room. 22. Nurses' records, etc. 23. Convalescent ward for 12 beds. 24. Porch. 25. Ward toilet. 26. Linen room. 27. Massage, whirl and pool baths. 28. Rest room. 29 and 30. Douche and light baths. 31. Clerical force. 38. Offices for chief of reconstruction and assistants. 34. Residence recreation.

ture, and the patient's first impression is often lasting. From the time the case is taken from the ambulance or seen by the admitting physician until he is sent home, he should be made to feel that the best that can be done is being done, in the most efficient manner, with courtesy and kindness. No physician or nurse who has not been trained in receiving ward work has any business in this most important department; and

only those who have tact in dealing with working people should be in charge here.

The record system should have brevity as its symbol; only essentials should be put down. The special dispensary card should have the following essential facts recorded: name, address, home and factory, nearest kin, social state, name of foreman, occupation, time of accident, provisional diagnosis and temporary treatment. This card should be sent to the ward with the patient, with the additional data of: bath given, property listed, tetanus antitoxin administered, and statement as to whether the case is infected or clean.

#### RECEIVING DEPARTMENT WORK IMPORTANT

In the arrangement of space in most general hospitals, little or no attention has been paid to doctors' or nurses' suggestions as to the convenience or even necessity of proper apparatus in proper places, or of space for turning corners, or adequate lighting. Heretofore an architect has been asked to draw a plan based on his knowledge of previous plans, and he has often disregarded suggestions made by those most concerned in the future service of the building. Many hospitals have a receiving department, seemingly an afterthought it would seem from the appearance of some of them. It is suggested that this department be given consideration from a practical standpoint.

With the chief surgeon a full-time man, it is possible for him to see immediately the cases brought directly to the hospital, or sent in by outlying stations, and pass judgment on the further disposition of the patient, as to proper ward placement and initial treatment. A ward of sufficient size to meet emergency needs should be established in connection with the receiving department. As it is now in most general hospitals, the "case" is seen by the intern, and the most frequent expression heard is: "I guess we'll put him in such and such ward." Sometimes it has been half a day or whole day before the chief surgeon has seen him. The routine of this department should be carefully and minutely outlined, with no openings for mistakes. Lastly, a routine administration of tetanus antitoxin should be a steel-bound rule, neglect of which should mean immediate dismissal, as it meant court-martial in the Army overseas.

#### EXAMINING DEPARTMENT

It would be an insult to present day knowledge not to include in such a program a department for pre-employment and periodic physical examinations. The arrangement of examining, waiting, dressing, and record rooms should be such as to enable one doctor and attendant to examine a reasonable number of applicants in a short time. If the amount of this work proved to be very great, a full time examiner would be required, and for the best results it has been found that better records are made by one doing

this work exclusively, instead of by members of the staff taking turns at it. In this department could be placed any special clinics, *i. e.*, eye, ear, nose and throat, genito-urinary, and dental, as indicated by the survey, and the policy of the management.

#### AMBULANCE SERVICE PROVIDED

It would be good for every ambulance surgeon and driver to ride in an ambulance—as a patient! The longer the ride, the sooner would be brought about the necessary reform of almost every present ambulance service. Most ambulances are driven as if the patient were on a joy ride, and the pavement of glass instead of cobbles and trolley bunkers. The present qualifications of the usual driver are knowledge of streets, and experience in driving. It is maintained, however, that every hospital should be equipped with up-to-date and comfortable ambulances and should employ a personnel trained in handling sick people. If there are outlying stations there should be an ambulance to serve each one, supplementing the central service.

#### THE SURGICAL DEPARTMENT

In considering the operating department, one cannot get much further than principles. The scope of industrial surgery is largely fracture work, repair of large wounds, which includes nerve and tendon injury, or a combination of all these.

A well known, successful industrial surgeon, who was also a chief surgeon, stated that he had extremely few infections in fifteen years of experience. He said the reason for his success was partially due to his constantly keeping in mind the maxim of that master mind and hand, John B. Murphy, that the way to prevent infection is to keep away from infection.

At any rate, the thought seemed a good one, and from it comes the idea of separate operating rooms for infected cases, respectively; and, by separate is meant operating room itself, sterilizing room, supplies, instruments, anesthetizing room, scrub-up room, etc.

The size, arrangement, equipment, operating routine, cannot be given space here, but a few salient points regarding surgical equipment would aid in making things run smoothly: Having two full sets of surgical instruments; two teams of surgical nurses; anesthetizing on the operating table; swinging doors done away with, and electrically operated sliding doors substituted; bacteriological tests made for slips in surgical routine; bacteriological tests in sterile routine of gauze and sutures; location of operating rooms convenient to wards; and heated passage to and from operating room and ward.

In consonance with the idea of separate operating rooms for infected and clean cases, it follows that separate wards should be considered.

When a case adjudged clean develops infection,



it should immediately be moved into the infected ward, and all the dressing instruments thoroughly disinfected and sterilized; the infected case should be treated as a danger to other patients. Grouping of similar cases not only is easier for the nurses, but the psychology of it, in regard to the patient-employee, is sensible; this principle could be followed with benefit throughout the entire time of hospitalization.

As to capacity and arrangement, reference is made to diagrams. The ward of ten or twelve beds is easier to manage than one of twenty or twenty-four beds, which is usual even in many modern hospitals, and the work of the nurses in a small ward is more effective. This department would be incomplete without a plaster room with full anesthetic equipment; the splint and fracture apparatus room should not be attached to the ward, but should be an entirely separate room near to the repair and carpenter shop. A master carpenter or cabinet-maker, capable of making every known splint or its modification, on short notice, should be in charge. There should be an abundance of every possible appliance.

It is a question whether a solarium should be attached to each ward, or whether a solarium should be built to accommodate all the hospital cases. Certainly a smoking room, equipped with necessary amusement paraphernalia, should be a part of each ward.

#### WARD FOR MEDICAL CASES

If the survey reveals a sufficient number of medical cases to necessitate a special ward, its construction need not differ materially from the other, except the provision of two quiet rooms. It need not be as large as the surgical wards. If there is a venereal clinic, a separate ward should be arranged for; but this depends on the policy of the management.

#### LABORATORY AND X-RAY DEPARTMENT

Laboratory work could be largely confined to bacteriological work, with necessary routine tests when called for. Owing to the nature of the work in such a hospital, every facility for research work in bacteriology and serology should be provided as an aid to the surgeon. Emergency sera could advantageously be kept in the wards and in the receiving ward, and a stock supply in the central laboratory. A resident pathologist is pre-requisite.

The X-ray is of course an indispensable part of an industrial hospital. However, if a bedside outfit were part of the equipment, it would add considerable efficiency and obviate a great deal of delay and discomfort to the patients. More attention should be paid to progress reports in this department, leading up to a final report before the patient leaves the hospital, or even a year after, for review of the case at the staff conference.

In this department comes the second stage of

a man's return to work, and in most cases it is the hardest for him. It is also difficult for those who have his care. So much has been written on the psychology of the cripple and the treatment of his mental attitude during convalescence, that those interested are referred to the many articles on reconstruction published during the war. However, some things are necessary besides mere equipment; "personal touch" should be considered the most useful asset in this department. The convalescent industrial case is human and during the period of compulsory inactivity he needs encouragement; the interest taken by someone who understands is much appreciated. Nowhere can the convalescent receive more sympathetic encouragement to get back on the job than in this department, and the selection of a personnel under the direction of a surgeon experienced in this work should be considered of paramount importance.

The personnel should consist of a surgeon accustomed to handling industrial workers, having a fair knowledge of many of their individual jobs, and able to demonstrate the necessary treatments in each case. He should be allowed to select his own workers according to their ability, personality, and willingness to cooperate; the number of workers should be sufficient to care for easily, without haste, all the cases under consideration.

Physio-therapy includes: the application of massage, electrical and manual, hot and cold water, baking, muscle re-education, and gymnastics. The arrangement of the various rooms should be determined by the order of their use. Massage tables, baking apparatus, light and whirlpool baths, with electrical attachments at each table for any necessary applications of electrical currents, can be in one room; machines and appliances for muscle re-education and gymnastics, require a room by themselves. If a department of hydrotherapy is required, a special douche room and vapor or light bath compartment, with connecting rest room, is essential.

The card system here is most important as a progress record, and should contain: surgical history, diagnosis and proposed treatment; all measurements of motion, strength, and other notes of progress should be carefully recorded for final review at weekly or, monthly conference both by the surgeon in charge of the case and by the chief surgeon.

#### THE COMMISSARY DEPARTMENT

A hungry soldier cannot fight efficiently, and neither can efficient hospital work be done on an inadequate and tasteless diet. If the story of a nurse who has had eating experiences in over twenty hospitals, in twenty different states, is to be believed, then the food department in most general hospitals is very often the most poorly managed. It would be hard to put one's finger on the exact cause of the usual poor commissary

existing in most hospitals today; some say graft, some inefficiency in buying; some blame the cook, and some the dietitian. One does not hear complaints about the majority of good hotel dining rooms, though the problem is about the same. Hotels manage their kitchen on a profit and loss basis, and give service accordingly; hospitals should assume this attitude, at least, and profit would accrue from satisfied personnel and patients, besides an actual saving from efficiency.

A slight change in the usual system now existing is suggested. It is proposed to put in charge a hotel-trained chef, who will have entire authority in preparing the food. A nurse who has had training in dietetics will consult with the chef in regard to all food for the patients, and prescribe the menu.

The need and advantage of re-training an injured workman has been shown to be an essential part of any scheme for reconstruction, by the splendid work done during and after the war, in Europe and in this country. There are numerous plans from which to choose, and their application in the group industrial hospital is easily accomplished.

A few essential principles should be considered for effective work; vocational training, either along the line of the patient's work or in some similar trade, should begin in convalescence, even before the patient is out of bed; the book and chart work can be quite easily started in the ward. Before the first week is ended, an injured man should be surveyed, an estimate made of his probable disability, and also of his capability, classification recorded, and the training offered him. It is more reasonable to emphasize an injured man's assets rather than his liabilities, and the mental attitude of the usually discouraged cripple when guided along the proper channels, not only gives him an opportunity for a "come-back," but puts him in such an environment that he wills himself into getting well and back on the job.

There are three main classes into which most injuries fall, and in some cases the man requires re-training:

- (1) Fractures and sprains of upper extremities.
- (2) Fractures and sprains of lower extremities.
- (3) Contractures, nerve injuries and muscle atrophy.

There might be added another class to include medical cases. These are basic, and disabilities can be rated under these heads for all practical purposes. After a man has had a primary training in the hospital school, there could be a system of transfer to one of the workshops of the group, where he can finish the practical work. Such a department would call for the careful supervision of the surgeon in charge of reconstruction; teaching can be done by men or women trained in such work.

#### QUARTERMASTERS DEPARTMENT

This department can be divided into two depots, one for ward, operating room, and dispensary supplies, and another for general supplies.

(1) *Hospital Supplies*.—A pharmacist, with an assistant who is a graduate nurse, should be in charge of hospital supplies. These would include drugs, chemicals for disinfection, laboratory, ward and operating room apparatus, and other necessary material, such as raw gauze, instruments, etc.

(2) *General Supplies*.—These would include all supplies for kitchens, laundry and office. This depot should be on a strict business basis and have a thorough checking system, and managed by a storekeeper.

#### FOLLOW-UP OR SOCIAL SERVICE

This department should be an integral part of the hospital, and the idea of charity, so general in hospitals at present writing, done away with. The same care should be used in the selection of the personnel of this service as that of any other department, basing it on experience and training in industrial relations, personality, and enthusiasm for the work.

The work could be divided as follows: (1) Dispensary. (2) Wards. (3) Outside.

These are equally important. The record work would include: records of all patients, in the hospital and discharged, with a brief summary of hospital record; weekly or monthly report, if called for, of all patients discharged within one year or longer; weekly ward reports; family follow-up reports; vocational reports; employment reports.

A chief with two assistants, one for the dispensary and ward service and one for the outside work, empowered to select the remaining personnel sufficient for effective work, should be placed in charge and allowed to manage the department without interference.

The record should have brevity and simplicity as its features. One of the essentials of all follow-up work is a clear history, and an interpreter is an absolute requirement in this country of polyglot languages, and is not only useful in this department, but frequently very necessary to the surgeon.

Just a word on outside work: While working with the War Risk Insurance Bureau, it was found that a man would be willing, almost always, to go to the hospital or sanitarium, or in training at the Federal Board, provided his family was taken care of. It would seem, therefore, that if, while in the hospital, an injured man knew that his compensation was paid promptly, and that his folks had enough to eat and wear, the bond of loyalty to the hospital and his employer would be strengthened; and he would, forever after, be a booster for the service. Besides this, he would be greatly encouraged to



make an extra effort towards a complete and rapid recovery.

#### THE RECORD SYSTEM

If at all possible, a complete card system is advised, doing away with the long history and treatment sheets which continually inspire verbosity on the part of historian and nurse. The system of card index is universally satisfactory, and, in the case of a special hospital where the history is not a part of a teaching system, it would more than prove its worth in compactness, durability, and efficiency.

In an industrial hospital most of the cases are surgical and do not require the taking of any lengthy previous history, but, nevertheless, do require certain essential facts to make them complete. A few of them can be mentioned here:

(1) How, when, and where accident happened. This should be carefully recorded, and, if necessary, corroborated by witnesses, better by the foreman.

(2) Physical examination of stripped patient to include any other injury or any complication aside from chief complaint or disability.

(3) Daily notes of progress and treatment by surgeon in charge.

It is unnecessary to enumerate details concerning the card used; the above are points noticed in review of numerous industrial surgical histories, conspicuous by their absence. The importance of a record system that really records is inestimable—establish a good record system before the hospital is built; otherwise a litigation may start which depends on one small record that is not complete—the cost will wipe out a fund sufficient to establish a bed in perpetuity.

The purpose of industry is production for profit, and a great deal of the profit depends on the physical fitness of the real producers—the workers.

Heretofore there have been three main parties concerned in the welfare of the employee—the worker, the manufacturer, and the accident insurance company. These three should get together on a business agreement, and each receive an equal share of the benefits. The worker would receive health service worthy of the name, and none is too good; the employer would see an increase in production through a healthy and contented working force and a lessened labor turnover; the insurance company would profit accordingly.

It seems a destructive attitude for one class to criticize another, and certainly does not get anywhere in solving the problem. The writer firmly believes that no final adjustment of things will be reached until the three classes get together on an equal basis, each considering the other necessary to the plan. Perhaps the idea is too new, or sounds too idealistic for these strained times, but eventually there will be an adjustment of this problem and some such plan will be the working basis.

There are some things that cannot be done, and one of them is the prompt and efficient organization of group hospitals, with all their ramifications, by the State or Federal Government; somehow or other, politics creep in, with its consequent inefficiency and endless red tape, which has the inevitable result of slowing up the machinery. The competition which would be stimulated by the group plan should keep up a better standard of efficiency. Legislation is a necessary aid, but the better plan is to prove that good service is the only right way, and not to compel those concerned to toe the line because of the law. This is not speaking in disparagement of the United States Public Health Service; however, this splendid organization is hindered at every turn by lack of funds for the developing of present work, such as hospitals for sick soldiers. It already has too much to do.

The establishment of group industrial hospitals, as outlined above is a practical and reasonable answer to the solution of the problem of the industrial cripple, injured by accident or disabled by some other health hazard.

In conclusion, what benefit will be derived from work done during the great war, both with the army at the front and in industry at high pressure at home, if not applied for the good of industry at large?

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#### SOME MISBRANDED VENEREAL NOSTRUMS

The following preparations have been the subject of prosecution by the federal authorities under the Food and Drugs Act on the ground that the therapeutic claims which were made for them were false and fraudulent: Injection Cadet (E. Fougere and Co., New York), a dilute watery solution of copper sulphate and unidentified plant material. Knoxit Injection (Beggs Manufacturing Co., Chicago), a solution of zinc acetate with alkaloids of hydrastis, in glycerin and water. Knoxit Liquid, a solution of zinc acetate with alkaloids of hydrastis, in glycerin and water. Knoxit Globules, essentially a mixture of volatile and fixed oils and oleoresins, including copaiba balsam, cinnamon and cassia. Grimault's Injection (E. Fougere and Co., New York), a weak watery solution of copper sulphate and plant extractives, probably matico. Halz Injection (Edw. Price Chemical Co., Kansas City, Mo.), consisting essentially of zinc sulphate, boric acid, glycerin, traces of alum and formaldehyde and water. Tablets which seem to go with the product consisted essentially of calcium and magnesium carbonates, copaiba, a laxative plant drug, plant extractives, a small amount of an unidentified alkaloid, sugar and starch. Noxit (Frederick F. Ingram Co., Detroit), consisting essentially of opium, berberine, a zinc salt, glycerin, alcohol and water. Crossmann Mixture (Wright's Indian Vegetable Pill Co., New York City), essentially an alcoholic solution of volatile oils, including balsam copaiba and cubebs. (Jour. A. M. A. 9-25-20, p. 891).

## Membership Enrollment in 1920 Indicates Appreciation of Organization Work and Sets High Standard for New Year

Once again December is at hand and the secretary-treasurers of the busy component societies of the State Association are enthusiastically engaged in their task of enrolling members for the coming year. The membership record achieved in 1920 is the high-water mark to date. It is the most conclusive evidence that could be desired of the appreciation which the physicians of this state have of the need and value of organization. The need next year will be even greater—with the unstinted support of its membership the strength of the Association will be increased to meet the new demands.

Comparing the 1920 membership with that for the previous year, it is seen that the enrollment of 4,777 (exclusive of the 17 life members of the Association) exceeds the 1919 figures by 85. Fifty-four counties attained the one hundred per cent. club by equalling or exceeding their enrollments during the preceding year. These counties are set in black face type in the comparative tabulation below. Seven others, unable to meet their 1919 quotas by reason of deaths and removals from the county, enrolled all eligible physicians available and are really entitled to inclusion in the one hundred per cent. class. These are marked by the asterisk.

Among the societies registering increases the gains made by the larger societies and academies are especially prominent. In Cleveland the 1919 figure of 548 was increased to 580; Columbus Academy jumped from 357 to 373; Cincinnati from 473 to 507; Toledo and Lucas County from 258 to 268; Montgomery 167 to 178; Stark County from 128 to 135, and Summit from 196 to 210.

County society officers are going after their job with a pep that reminds one of Ohio State's aggressive football eleven. They are going to stage the biggest membership campaign that has ever been attempted—a campaign that should send the Association enrollment past the 5,000 goal in 1921. Cincinnati Academy served notice sometime ago that it had adopted the motto "Six Hundred Before January 1st," and right there you have 93 of the 123 members required to reach the 5,000 mark.

As for the "early birds," who have already remitted 1921 dues, the palm again goes to Dr. Mary L. Cook, treasurer of the Warren County Society, who on October 15 certified nine of the 26 members of her organization. Dr. Isa Teed-Cramton, secretary of the Geauga County Society, was the second to remit dues and the first to enter the one hundred per cent. club, having certified all of the nine members of the Geauga Society. Seneca County has also paid 1921 dues for a number of members and other counties have notified the Columbus office that they have

made good starts and expect to complete collections early in December.

While the majority of society officers formally notify their members that their dues lapse on January 1, members should not delay payment awaiting such notice or depending on it as a last reminder. Payment of dues early in December will eliminate a big rush in the Columbus office, insure to each member prompt receipt of his membership card, and permit the headquarters staff to proceed with legislative, committee and other detail work without undue interruption.

In addition to remitting his own dues promptly, each member should take it upon himself to assist the society officers as much as possible. He should voluntarily appoint himself a committee of one to interest non-members in his community who are eligible to membership, in the work of the organization. He should explain to them the benefits to be derived through the Association's medical defense plan, Workmen's Compensation Bureau, *The Journal*, post-graduate lectures under the auspices of the Committee on Medical Education, and many other services which the organization is prepared to render its members.

When it is stated that the Industrial Commission annually pays to the physicians of Ohio approximately \$3,000,000 for medical services rendered in workmen's compensation cases, the value of the Association's bureau for the investigation and adjustment of doubtful and delayed cases submitted by members is readily apparent. In some way the mistaken impression seems to have been gained in a few communities that the workmen's compensation bureau has been discontinued. The Association maintains cordial relations with the Industrial Commission and with the hearty co-operation of Dr. T. R. Fletcher, chief of the medical department of the Commission, is in position to investigate thoroughly cases submitted by members.

The following is a tabulation of the comparative membership records during 1919 and 1920. It should be retained for use as a guide in the membership campaign for 1921.

County	Membership	
	1919	1920
*Adams .....	20	17
Allen .....	82	81
Ashland .....	23	23
Ashtabula .....	40	42
Athens .....	50	52
*Auglaize .....	32	30
Belmont .....	58	59
Brown .....	12	13
Butler .....	69	73
Champaign .....	28	25
Clark .....	70	69



Clermont .....	19	20	Stark .....	128	135
Clinton .....	25	26	Summit .....	196	210
Columbiana .....	77	70	Trumbull .....	43	48
Coshocton .....	23	19	Tuscarawas .....	46	44
*Crawford .....	37	36	Union .....	21	21
Cuyahoga .....	548	580	Van Wert .....	31	26
Darke .....	47	49	*Vinton .....	6	5
Defiance .....	12	13	Warren .....	30	26
Delaware .....	30	21	Washington .....	36	36
Erie .....	35	33	Wayne .....	30	31
Fairfield .....	38	34	Williams .....	32	23
Fayette .....	12	15	Wood .....	44	38
Franklin .....	357	373	Wyandot .....	9	8
Fulton .....	27	27			
Gallia .....	24	26	Total .....	4695	4777
Geauga .....	7	9			
*Greene .....	41	40			
Guernsey .....	26	27			
Hamilton .....	473	507			
Hancock .....	37	38			
Hardin .....	23	23			
Harrison .....	15	12			
Henry .....	23	24			
Highland .....	25	25			
Hocking .....	9	10			
Holmes .....	11	12			
Huron .....	21	25			
Jackson .....	20	20			
Jefferson .....	52	48			
Knox .....	31	28			
Lake .....	25	27			
Lawrence .....	29	31			
Licking .....	45	47			
Logan .....	41	40			
Lorain .....	69	68			
Lucas .....	258	268			
*Madison .....	20	19			
Mahoning .....	121	124			
Marion .....	53	54			
Medina .....	24	20			
Meigs .....	13	13			
Mercer .....	30	26			
Miami .....	41	42			
Monroe .....	9	7			
Montgomery .....	167	178			
Morgan .....	11	15			
Morrow .....	12	12			
Muskingum .....	54	57			
Noble .....	10	11			
Ottawa .....	13	13			
Paulding .....	20	21			
Perry .....	22	22			
Pickaway .....	27	24			
*Pike .....	12	10			
Portage .....	27	28			
Preble .....	21	18			
Putnam .....	30	28			
Richland .....	54	54			
Ross .....	34	38			
Sandusky .....	33	31			
Scioto .....	57	56			
Secena .....	31	29			
Shelby .....	18	21			

### Health Department Issues Warning as Diphtheria Increases

Diphtheria, exhibiting its usual fall increase in prevalence in the state, caused the State Department of Health to issue a warning in which it declared that "every diphtheria death is unnecessary and is evidence of some one's neglect. With our thorough knowledge of the prevention and treatment of diphtheria, there is little excuse for serious outbreaks and no excuse for continued high death rates from the disease."

The October case total was expected to pass 1,000 when complete returns were compiled and November cases were coming in normal numbers. The September reports totaled 707 cases. Last year's figures were: September, 661; October, 1243; November, 1363.

The health department statement emphasized the duty of the parent to consult a physician when a child shows signs of diphtheria; the duty of the physician to administer antitoxin at once if he suspects diphtheria and the duty of the health officer to see that exposures are examined, isolated and treated if necessary.

The department advises use of the Schick test to determine the immunity or susceptibility of children in the presence of diphtheria and administration of the toxin-antitoxin immunizing treatment to all found susceptible. It advises physicians to make use of its free laboratory diagnostic services.

The new regulations for the control of diphtheria, permit release of patients from quarantine only when recovery is established by two consecutive negative cultures taken not less than forty-eight hours apart.

Union Medical Association of the Sixth Comcolor District, under the presidency of Dr. John G. Wishard of Wooster, held an interesting meeting in Orrville, November 9.

## OHIO PUBLIC HEALTH NOTES

The winter smallpox prevalence which has characterized recent years in Ohio is making itself felt again. The village of Johnstown in Licking County and the cities of Lima and Delphos in Allen county were important centers indicated in early November reports.

—Forty-three cases of trachoma were discovered in the public schools of Springfield in a survey conducted in late October, under the joint auspices of the local health department, the State Department of Health and the United States Public Health Service. Three cases were found in the parochial schools.

—A free mental hygiene clinic for the treatment of persons in the early stages of mental trouble, has been established by the Montgomery County Humane Society in Dayton, and is under the direction of Dr. E. A. Baber, superintendent of the Dayton State Hospital. It is pointed out that the state spends millions in the care of the insane but scarcely anything is done to prevent insanity.

—"Recognition Day," the last of the four-day semi-centennial celebration at Ohio State University, was devoted to public health. Opening the day's program, President W. O. Thompson, spoke on the necessity of arousing the public to an interest in public health. Dr. A. W. Freeman, state health commissioner, followed with an address on "The Medical Profession and Public Health," in which he traced the development of medicine from an art to a profession demanding the highest scientific training.

—Autos for city nurses to help solve the nurse shortage problem in Cleveland will be asked for in the 1921 budget of the health department, according to Health Commissioner Rockwood. The city now has 77 public nurses, 50 visiting nurses and 30 school nurses, but 100 more are needed.

—The Mansfield school board has authorized the inclusion of a course in home hygiene and care of the sick in the curriculum of high school girls of that city.

—Following a survey and registration of crippled children in Portage county by the county health commissioner, a free clinic was held at which 29 crippled children from Ravenna, Kent, Mantua, Rootstown, Deerfield, Randolph and Nelson were examined. It is believed that in all but four of the cases examined treatment will be found beneficial and an attempt will be made to place the children in institutions equipped for their treatment.

—Through the generous bequest of Mr. Herbert Baker the Toledo District Nurses Association has been able to purchase the property at the corner

of Monroe and 19th Sts. This has been remodeled and is now well adapted to meet the needs for offices and a dispensary. The lower floor contains several offices, the conference room, and a residence for the caretaker. The upper floor is divided into examining and treatment rooms. A pre-natal clinic is held each week. A pre-school age clinic has been organized for children between the ages of two to five. Here periodic examinations are made by the staff physicians. Special departments for the examination of the ears, eyes, nose, and throat, for cripples, and for gastro-intestinal cases have been organized. Educational classes are held for mothers and prospective mothers.

### Dangers of Polluted Water Supply Emphasized in Salem Epidemic

The necessity for painstaking sanitary supervision of every detail of a public water supply installation has been illustrated in a striking manner by the typhoid fever epidemic at Salem.

More than 800 cases of typhoid, as well as several thousand cases of diarrhea, resulted from contamination of the city water supply by sewage which leaked into a tile pipe line carrying water from one group of wells to the distributing system. Tile pipe lines, it is pointed out by officials of the State Department of Health, are on the Department's "black list," along with cross connections to industrial water supplies, emergency intakes from impure sources and well coverings not sealed against surface contamination, all of which are classed as potential sources of danger. These features are not approved in present day water supply installations, plans for which must receive the formal approval of the department. The Salem epidemic, however, is the first definite case on record in Ohio in which a tile pipe line resulted disastrously in practice.

It is said that several other communities in the state have water supply systems involving these potential sources of danger and that only chance has protected them thus far from epidemics like that of Salem.

The Salem outbreak was speedily brought under control, so far as further spread was concerned, by elimination of the pipe in which the contamination occurred and disinfection of the city water supply by means of the emergency chlorination apparatus of the State Department of Health. From the standpoint of medical and nursing service, however, it continued for several weeks to constitute a serious situation. Physicians and nurses were brought in from outside to aid the local forces and the Red Cross chapter was active in developing community relief measures. The State Department of Health had a force of nine persons, including five physicians, two sanitary engineers, a bacteriologist and a nursing supervisor on duty at Salem. A thorough epidemiological study, involving a house to house canvass to discover unreported cases, was made.



## Policy of State Medical Board Vindicated<sup>1</sup> and<sup>2</sup> Constitutionality of Medical Laws Again Upheld by Reviewing Court in Chiropractic Case

Not only is the constitutionality of the Medical Practice Act upheld in a decision rendered by the Court of Appeals of the Eighth District on November 12, but the State Medical Board is exonerated from claims of unfair and unlawful discrimination against chiropractors and limited practitioners in the case carried to that court on appeal from the Common Pleas Court of Cuyahoga County in the suit instituted some months ago by unlicensed chiropractors of Ohio against the State Medical Board, referred to in detail in the April issue of *The Ohio State Medical Journal* on page 271.

It will be remembered that the adverse decision in the lower court enjoined the State Medical Board from prosecuting this particular class of practitioners on the ground that the legislature in enacting the Platt-Ellis law in 1915, and in recognizing chiropractic and other limited branches, had in effect recognized the standard schools of chiropractic in existence at that time, and that the provision of the law giving the State Medical Board the right to establish rules and regulations under which no school of chiropractic had been able to qualify, did not empower the board to pass on the merits of such schools even when they refused the board permission to make investigation.

The Platt-Ellis Law, or Medical Practice Act, became effective October 1, 1915. This law empowered the State Medical Board to register persons desiring to engage in limited practice. Among the limited practitioners enumerated were chiropractors. The State Medical Board, following the statute, defined the various branches of limited practice and prescribed rules and regulations governing their practices. The statute also clothed the board with the right to inspect and recognize as in good standing those schools of limited practice which in the board's opinion gave a course of instruction worthy of recognition. Investigations by the board showed schools of chiropody, massage, hydro-therapy and mechanotherapy giving a course worthy of recognition, which was accorded. Chiropractic schools investigated were not found in satisfactory condition and suggestions were made for improvement. Four of the so-called leading schools of chiropractic refused the board the right of inspection. The result of this condition was that in the State of Ohio no school of chiropractic obtained a recognition from the State Medical Board and therefore none of their graduates were admitted to the examination for certificates to practice.

From the enactment of the law until 1919 the State Medical Board was able to convict some 28 of these practitioners for practicing without a

certificate. The procedure was tedious, in that an inspector was compelled to collect evidence, submit it to the prosecuting attorney for consideration by the grand jury, and if an indictment was found, the case then took its place upon the common pleas docket to await its turn. Recognized in law as a misdemeanor, these cases naturally were not promptly called and in many instances the witnesses were gone before the cases were brought to trial. Delay made it possible for the chiropractors to continue in practice in open violation of the law. The free use of advertisements created local support.

The last legislature amended the penalty section of the Medical Practice Act (the Talley Law), eliminating the jail sentence, unless the affidavit charged the offense to be a second one. This amendment empowers the State Medical Board to bring a case before a justice, municipal court or any court of record, to be heard on its merits and without a jury trial. The result of this legislation has been that cases so brought have been promptly heard. The delay was eliminated until the chiropractors secured the restraining order in the Common Pleas Court of Cuyahoga County.

\* \* \*

The Court of Appeals which reviewed the recent Cleveland case and dismissed it at the cost of the plaintiffs, declared that this was an attempt to re-open the question of constitutionality which has been repeatedly upheld in other cases.

On this point the decision of the Court of Appeals held that:

"It would almost seem that no new question is involved; that the questions raised in this proceeding have been settled by repeated adjudications of the courts. This concerted effort on the part of the chiropractors is, however, apparently regarded as necessary, from the fact that, although the statutes provide for the practice of chiropractic, the control of the practice has been placed in the State Medical Board, which, it is claimed, has disregarded a provision of the statute requiring it to determine and pass upon chiropractic schools. It is apparent from the argument of this case, that the real complaint is not so much against the constitutionality of the statutes, as it is against the administration of this law by the State Medical Board, although the claim of unconstitutionality is boldly and confidently asserted, and appears to form the grounds for the relief sought. Nevertheless, we think it is apparent that the chiropractors would be satisfied with this law, if the board would recognize and approve of their schools, and carry out the provisions of the statute, relative to the examina-

tion and licensing of chiropractors. Their real ground of complaint is, that the administration of this law is put into unfriendly hands, and we are convinced that any relief which a court could give, must be based upon this ground, rather than upon the no longer debatable ground of the constitutionality of the statutes in question."

As a complete answer to whatever objection may be raised by the court in the preceding paragraph, it may be said that the State Medical Board in its revised rules adopted at the April session provided for the admission to the examination of any chiropractor who could show certificate in preliminary educational qualifications of High School graduation, and a residence course of eighteen months at a chiropractic school. As proof conclusive that the chiropractors do not desire to raise their standards but merely to legalize their business under their own control, is indicated by the fact that no chiropractors presented themselves for examination at the June session under the new provisions.

The Court's decision further points out the inconsistency of the chiropractic contention in the following words:

"In view of the decisions of the court, before whom the question of the constitutionality of the limited practice act has come, it seems futile to discuss further the constitutionality of the limited practice act. The case for chiropractic, in our opinion, would not be helped in the slightest degree by declaring the sections relating to limited practice unconstitutional. Suppose this was done, and suppose they were declared unconstitutional, and the offending sections relating to limited practice were expunged; the chiropractors would be in as bad a plight, indeed a worse plight, than they would be today, for then there would be no permission, or no possible means of justifying the business of chiropractic in the State of Ohio. Holding the limited practice act to be unconstitutional, would have a curious effect, so far as the plaintiffs and those similarly situated are concerned, because then they could not practice without taking the general examination, the same as general practitioners, and there would be no legal possibility of their having the right to practice, as it is granted to them under the limited practice act.

" \* \* \* \* In a general way, the intention or policy of the chiropractors is somewhat similar to that which would be presented if a guest were invited into my house, and finally succeeded in dispossessing me, or at any rate, of running my household. The guest ought to have only such rights as I gave him, and chiropractic should have such rights as the law gave it. Among these rights was the unquestioned right to have the medical board determine the good standing of its schools, and Section 1274-5 provides, among other things, that

"The State Medical Board shall determine the standing of schools, colleges, institutions or indi-

viduals giving instruction in such limited branches.' That if any individuals have any complaint against the State Medical Board on the grounds of discrimination that a sufficient remedy lies in mandamus to compel the board to admit the complainant to examination is set forth in the following language.

"Now, under the existing medical law, as we have just shown, Sections 1274-5, the duty of determining the standing of schools, colleges, etc., giving instruction in such limited branches, is specifically and expressly enjoined upon the State Medical Board \* \* \* \* and it seems to us clear that the State Medical Board can be compelled by writ of mandamus to exercise its judgment in passing upon the standing of schools, colleges, etc., giving instruction in such limited branches. And we can see no reason why a writ of mandamus would not lie for that purpose. And, if mandamus lies then it seems to us that there is a plain and adequate remedy at law.

"It is true this remedy may be obnoxious to the plaintiffs, and they may feel that they cannot obtain such favorable action as they desire, by the use of this remedy, but in considering this matter, the policy of the State of Ohio in regard to the practice of these limited branches should always be born in mind. It was clearly indicated, as early as 1902, that it was the desire and policy of the State of Ohio to encourage the gathering together of all the knowledge of the world, concerning the healing art, under the general head of 'medicine.' We have heretofore attempted to set out what we think is the policy of the state upon this subject, in the case of Shaw vs. State of Ohio, 30 O. C. A. (Ohio Law Reporter for March 8th, 1920, page 449.) and we do not feel like departing therefrom.

"We think that the prayer for injunction, or any injunctive relief, should come under the pleadings and the proof in this case, be denied. The petition will, therefore, be dismissed at the cost of the plaintiff."

The case of Shaw vs. the State above referred to in the court's decision and which was heard and decided by the same Court of Appeals consisting of Judges Dunlap, Vickory and Washburn, and later reaffirmed and upheld by the Supreme Court, held in effect that any and every person who attempts to practice the healing art should be grounded in the fundamentals, and be able to distinguish between the different diseases, and to recognize the importance of diagnosis. Pertinent sections in that decision are quoted:

"We are not greatly concerned that you should know what you are about to attempt to cure. We are more concerned that you should properly diagnose the case which you are called to treat than we are about your therapy or method of cure.

" \* \* \* The solid and enduring argument against the passage of this and all similar laws (referring to a bill introduced some years ago



seeking to divorce the respective branches of osteopathy and medicine) is and must be that encouragement should not be given to a separation or division of the healing art into schools, to the setting up of one against the other, and to the creation of rivalry among them; that every encouragement ought to be given to an exactly opposite tendency, to-wit, the gathering together under the general head of medicine of all the knowledge of the world concerning the healing art; and that when some discovery of importance is made in this field it should not instantly justify the birth of a new school of healing or therapy, at once seeking to divorce itself from its proper sphere, but should gain its recognition through the constituted medical and scientific channels."

\* \* \*

Just before this issue of *The Journal* went to press, the chiropractors made an attempt to appeal to the Supreme Court in their latter case, but judging by the law already clearly determined in the Shaw case, it is more than probable that the decision of the Court of Appeals will be upheld.

Gratifying as the Court's decision is, making it possible for the Ohio State Medical Board to proceed against present violators of the law, the chiropractors and other cults undoubtedly will redouble their efforts to secure the passage of the pernicious bill prepared for initiative and filed with the secretary of state, for introduction in the legislature, referred to in the November issue of *The Journal* on page 794.

#### SMALL ADVERTISEMENTS OF INTEREST

**For Sale**—Yale Statistic Machine with Electric Motor, slightly used. Antique oak solid frame. French plate. X-ray apparatus, \$200.00 to quick buyer. Address P. O. Box 895, Youngstown, Ohio.

**Physician Wanted**—Savannah, a village of about 300, located in Ashland County, wants a physician to locate there. The town lies in a good farming territory; has electric lights, first-grade high school, three churches and good community spirit. Paved roads north and south to New London and Ashland, respectively, and each of these towns have good hospital facilities. For further details, write to Mr. John Gibson, City Clerk, Savannah, Ohio.

**Opening for Physician**—The village of Birmingham, or Millnersville as it is called, located in Guernsey County, desires a resident physician, and has requested *The Journal* and the State Department of Health to bring the matter to the attention of physicians desiring new locations. Physicians in nearby towns have more than they can do. Inquiries should be addressed to Mr. W. F. Longworth, Kimbolton, Ohio, R. D. 2, No. 44.

**Wanted**—Graduate Physician for 85-bed hospital. Fairview Park Hospital, 3305 Franklin Ave., Cleveland, Ohio.

**For Sale**—Retiring physician (only one in town) desires to sell his property, known as physician's residence for many years. Good 10-room house with two office rooms, garage, large stable, acetylene plant, in center of small town situated 14 miles from Dayton. Railroad facilities, good roads, churches, schools, and excellent farming territory surrounding. Plenty of work, collections good. Address B. L., Care *The Journal*.

#### Ninth District Meets; Post-Graduate Series Closes

The Ninth District Medical Society, meeting in annual session at Gallipolis, October 7, elected Dr. W. H. Parker of Wellston, president, and Dr. A. H. Ray of Jackson, secretary for the ensuing year, succeeding Drs. C. E. Holzer and Milo Wilson of Gallipolis.

The meeting was well attended and the scientific program, consisting of a lecture on "Fundamental Considerations in Pediatrics," by Dr. Henry John Gerstenberger, this year's lecturer for the Committee on Medical Education of the State Association, was a decided success, calling forth a hearty vote of thanks for the speaker.

Those in attendance were Drs. O. H. Henninger, O. H. Snyder, S. W. Wiseman, Casper Burton, W. W. Lynn, W. F. Marting, Ironton; W. L. Griffith, O. Wiseman, Pedro; Harry F. Rapp, A. J. Nunnemaker, W. A. Quinn, Portsmouth; A. A. Hugg, L. A. Thomas, D. B. Hartinger, C. A. Poindexter, Middleport; A. E. Lawrence, Byron Bing, Jane Nye Gilliford, Pomeroy; P. A. Jividen, Rutland; John Philson, Racine; Gomer Jones, Oak Hill; R. A. Howell, Rio Grande; C. A. Rife, Kyger; C. W. Ely, Cheshire; B. V. Swisher, Radcliff; C. E. Holzer, G. A. Mack, O. A. Vornholt, G. G. Kineon, C. G. Parker, C. B. Parker, Frank Walter, G. A. Barton, Mary L. Austin, Milo Wilson, L. C. Bean, Leo C. Bean, J. S. Biddle, Robert Hall, Ella G. Lupton, J. T. Hanson, F. L. Bossard, F. T. Raivilles, Gallipolis; O. W. Lusher, Hoggsett, West Virginia; Worthy Withers, Arlee, West Virginia; J. W. Stone, West Columbia, West Virginia.

The 1920 lecture series of the Committee on Medical Education was closed by post-graduate group meetings at Lima on November 16, and Steubenville on November 23. The Lima meeting was arranged for the benefit of the physicians of Allen, Auglaize, Hancock, Hardin, Mercer, Paulding, Seneca and Van Wert Counties, and that at Steubenville included the Seventh Councilor District. A total of ten lectures covering practically every section of the state, was delivered during the summer and fall months, constituting one of the most successful post-graduate series ever arranged by the Committee on Medical Education. The complete lecture on pediatrics, as presented by Dr. Gerstenberger, will be published in the near future for distribution to members of the Association.

The American Journal of Obstetrics and Diseases of Children, which discontinued publication in February, has been succeeded by The American Journal of Obstetrics and Gynecology, issued for the first time in November.

## In Evaluating the Benefits of State Association Membership Carefully Consider the Medical Defense Feature

Medical Defense. What is it? What does it mean to the members of The Ohio State Medical Association?

Inquiries received concerning the Association's defense plan indicate that in general the members do not understand clearly what the defense fund covers and how it is administered. As the time for payment of dues is at hand and in order that no one may inadvertently forfeit any part of the protection which he receives or should receive under this provision, members should carefully consider the scope of the work and its importance to each and every member.

The past year, marked by a state of industrial and economic unrest, inspiring in the unscrupulous a desire "to get something for nothing," has produced a record-breaking number of malpractice actions. The number of cases referred to the Association exceeds the number referred in any two previous years since May, 1916, the date of the establishment of the defense fund.

Recently while approving a large bill for medical defense, Dr. Sylvester J. Goodman, chairman of the Committee on Auditing and Appropriations, remarked that most members have no idea of the cost of such defense and do not realize the service which the Committee on Medical Defense is prepared to render them, if the need should arise, for the small proportion of his \$5.00 State Association dues assigned to this work. However, the aggregate sum spent on medical defense is actually considerable.

For example, on January 1, of the present year the Association was conducting defense in seven alleged malpractice actions. Since that time four of these cases have been terminated favorably for the defendant physicians, and three are still pending. The four suits settled cost the Association exactly \$1,509.51 in attorney fees, exclusive of postage and other items incident to the conduct of the cases. In one instance the attorney fees were \$690.00, but every cent paid was for a cent's worth of service. The Association is very fortunate in that it is able through its general counsel, to place the conduct of cases which require local attention in the hands of attorneys who consider the practice of law to be more than the receiving of a fee. Almost invariably, the services rendered have been fully worth every penny of the fee.

Legal technicalities are obviously such dry reading that the details of most cases do not lend themselves to cursory narration. Occasionally, however, incidents arising during the conduct of a suit so clearly illustrate fundamental principles as to be worth noting.

One suit in Mahoning County, which involved the largest expenditure of any that has yet been defended by the Association, has been the subject

of considerable comment. The case was well and capably handled in the preliminary steps, as well as in the course of trial, with the result that following a verdict in favor of the defendant physician, the plaintiff made no effort to secure a new trial. An outstanding feature, and one that particularly impressed the local attorneys designated by the Association's general counsel, was the splendid co-operation and support rendered the defendant by the local physicians. This well conducted case should, and no doubt will, have a tendency to discourage the bringing of other unfounded actions in this county and throughout the state.

Another case emphasizes the Association's absolute intent to prosecute defense to the limit, as obligated by the rules and regulations governing medical defense, so long as that is the wish of the defendant. And that it will do so, even though as in this case the committee would have been justified in refusing to proceed with the defense because of lack of co-operation on the part of the defendant who put upon the Association needless expense, both by neglecting to furnish the essential facts when requested and by unwillingness to follow the advice of our attorneys, and otherwise so hindered them as to unduly prolong the conduct of the case. The circumstances of the case made it almost certain that on suit the judgment would be against the physician. A nominal settlement was proposed by the attorneys for the plaintiff, which the attorneys for the Association advised the defendant to accept. On his refusal, however, they proceeded with the preparation for the defense of the suit, which six months later was cancelled as originally advised. The expenditure for defense in this matter was twice the amount of the settlement first offered to the defendant by plaintiff. The Association however, carried out its entire obligation to the defendant both in advising him to accept the proffered settlement which was clearly in his interest; and by preparing to defend him when he insisted upon allowing the suit to come to trial. Although the committee is exceedingly reluctant to advise any settlement of a suit, its obligation is to advise the physician as to his best interests, but even though a settlement is to the best interests of a member the committee will never insist upon the acceptance of a settlement, but will proceed with the defense until, as in this case, the defendant voluntarily brings the matter to a close.

The foregoing instances set forth the foundation motive; the "why-for" of the provision for medical defense; the reason for its limitation to defense, and the position of the pole star towards which its course is set. The purpose of medical defense is to defend. It will not seek settlements,



it will not pay indemnities, it will not relieve a physician of his professional responsibility, nor protect a member from a liability which is the just outcome of his acts. Its purpose is to see that no injustice is done a member, to make the sand-bagging of physicians with threats of suits unprofitable—very unprofitable; to bring it about that no suit shall be filed against a physician except when the facts are such as to make the filing of suit almost equivalent of a verdict in favor of the plaintiff. Whatever tends to bring this about is the business of the Association's medical defense.

Fifteen additional suits have been referred to the Association since January first; four are in the hands of our general counsel with trials now pending; seven in the hands of indemnity companies to whose attorneys the Association is according every aid possible in facilitating the preparation of the defense. The Association could not defend two members because of delinquency, their dues being unpaid during the periods covered by the suits. And there are two members who after referring cases to the committee have not as yet completed and sent in the requisite data.

Every member should know, that it is his money that pays for the printing of the rules and regulations; it is to his interest not just to read them, but to read them with attention and to put the copy where he can find it. If he has thrown it in the waste basket it is not the committee's business to remind him that in the case of casualties the funeral is his, not theirs. A thorough understanding of the rules and regulations under which the defense fund is operated will promote its efficient administration and result in increased service to members of the Association. With this thought in mind it would be well to review some recent developments.

As stated above, protection could not be given in two instances this year because the defendant physicians had permitted their Association membership to lapse. The rule on this point states that, "A member to be entitled to assistance in defense must be at all times in good standing (dues fully paid up) in his county society, and therefore in good standing in the State Association. A member in arrears is not in good standing. A member will not be defended in case of suit if the alleged cause of suit occurred or the suit was filed during a period for which the member is or was in arrears. A member will not not be defended in case of suit, the alleged cause of which occurred previous to membership in the Association." The Committee on Medical Defense must enforce this rule absolutely. The responsibility rests on each member to see that his dues are paid on time.

Another important point developed in connection with Rule 6, which provides that "The Association will not contribute to defense of a suit if brought on cross-complaint where the physi-

cian has sued to collect his bill within one year of the termination of his services."

Annoyed by his inability to collect for services rendered in a case terminated seven months prior, a member inquired of the Committee on Medical Defense as to the advisability of placing the matter in the hands of a legal firm for collection before the expiration of a year. The committee not only advised against this procedure, pointing out that the Association would not be liable for his defense in an action which might be brought as a cross-complaint, but even discouraged the use, before the expiration of a year, of means other than suit to urge payment because of the possibility of inspiring the filing of a malpractice action.

As the majority of actions referred to the Association arise from alleged improper reduction and treatment of fractures, Rule 7 requiring the use of X-ray plates in all cases of fracture or suspected fractures has frequently been the "bone of contention." The Committee has been compelled to withhold the Association's protection in a number of instances because the defendant physicians had failed to secure X-ray plates when it was reasonably possible to do so. It is recognized that there are cases in which the inaccessibility of radiograph facilities and perhaps the condition of the patient make this procedure impossible, but this is the exception rather than the rule. The committee has taken the position that no physician should assume responsibility for a case of fracture, or other injury in which the possibility that fracture may be present exists, unless the patient complies with the request that a radiograph be made. If the patient refuses, the physician should withdraw from the case with the explanation that he cannot take the risk that some time later the patient may bring suit which will find him (the physician) without indisputable evidence of the condition for which relief was sought. The radiograph is protection to both the physician and patient, and the patient should be told so in so many words.

The Association's interest is in no wise lessened because a member is entitled to protection under a policy in an indemnity company. On the contrary in many cases the advice of our general counsel as to the obligation created by the policy; their advice in certain instances where there is no legal precedent covering the point at issue; and their care of matters not covered by the policy has been of utmost importance to the physician involved.

The medical defense committeemen are just as much at the service of a member who is protected by an indemnity company as they are, were the defense conducted by the Association. The larger companies operating within the state are thoroughly awake to the value of the assistance which the Association affords through its committeemen, and constantly avail themselves of it.

The member's right to defense places upon the

Medical Defense Committee the obligation of seeing to it that he has adequate defense. If there be a question of the obligation of a private company to defend, our counsel determines the nature of the obligation and adjusts the difficulty with the company, in the meantime taking all steps to prevent any judgment by default, and retires when the private company takes charge. If the indemnity company is not obligated to take charge the Association assumes the entire defense. A case in point is now in the hands of the Association. By changing his policy from one company to another a physician was surprised to find, upon being sued, that he was unprotected by either policy. The cause for action had occurred under the old policy, the suit was filed during a period covered by the new policy, hence there was no obligation upon either company to defend him.

While the Association under Rule 12 cannot incur financial obligation in a defense conducted by a private company, the attorneys for the defense will if they request it, be accorded by the Association every facility for their preparation of the defense, which is at the command of the Association, the medical defense committeemen, or our individual members. The Association desires that the defense of a member shall be as complete as possible. It is absolutely immaterial to the committee whether that defense is conducted by the Association or by other parties.

That there has been an occasional instance in which agents of private companies have not spoken in the highest terms of the protection afforded to its members by the Association, is unfortunate, and undoubtedly has not the sanction of their home offices. The Association does not desire to supplant the private indemnity company, it makes no claim that the protection afforded by it was intended to supplant the insurance feature offered by indemnity companies. The Association's medical defense plan was inaugurated in order that its members should have the most complete protection possible; to supplement the protection of and aid members who carry policies with indemnity companies, and to provide protection for physicians who do not carry other insurance, and above all to make the practice of suing physicians an unpopular pastime. The plan was devised: to do that which no private company can do—place behind each and every member the moral and financial support of its total membership; not to pay indemnities, but to defend its members from ungrounded suits, blackmailing threats and petty persecutions. All threats of suits should be promptly reported to the committee. They are given the same consideration as actual suits, referred to our general counsel, by whom steps appropriate to the particular case are taken to avert the filing of suit. In most instances suits are never filed.

The success of the medical defense plan in any county or state is the measure of the capacity of the physicians of that locality to act collectively

for their individual protection. That the plan in Ohio has been a marked success is due in large measure to the willing co-operation of the total membership which has always been accorded to our counsel or their representatives, and to the able manner in which all matters are handled by the attorneys acting for the Association.

### Ohio Industrial Physicians Organize

Industrial physicians from throughout the state met in Columbus, November 6, and organized The Ohio Association of Industrial Physicians and Surgeons, the purpose of which is two-fold: first, to further the cause of industrial medicine, and, second, that the physicians of this state engaged in this comparatively new specialty may be affiliated with the American Association of Industrial Physicians and Surgeons through a component organization. The state organization will serve as a clearing house for the experience of its members in connection with the problems arising with the employers, employes and state authorities, and will elevate the general plane of industrial medicine.

Thirty-five physicians attended the organization meeting of the new association which has an enrollment of 40 charter members. Officers elected were: President, Dr. D. B. Lowe, B. F. Goodrich Company, Akron; Vice-president, Dr. S. M. McCurdy, Youngstown Sheet & Tube Company; Secretary, Dr. A. J. Lanza, The Hydraulic Pressed Steel Company, Cleveland; directors for one year, Drs. Otto P. Geier, Cincinnati Milling Machine Company, R. P. Albaugh, Borne Fuller Company, Cleveland; O. L. Kline, Buckeye Steel Castings Company, Columbus; directors for two years, Drs. C. D. Selby, Toledo; C. L. Ferguson, Cincinnati Milling Machine Company, and P. C. Gauchat, National Lamp Works, Warren.

### OFFICERS OF NORTHWESTERN ASSOCIATION

At the close of the seventy-fifth annual meeting of the Northwestern Ohio District Medical Association, October 27, Dr. C. W. Moots, Toledo, was elected president; Dr. H. L. Wenner, Tiffin, first vice-president; Dr. O. H. Tudor, Kenton, second vice-president; Dr. W. C. Pay, Bellefontaine, re-elected secretary; Dr. R. J. Morgan, Van Wert, treasurer. Drs. R. R. Hendershott, Tiffin, and John G. Keller, Toledo, are the councilors for the third and fourth districts included in the Northwestern Association.

Dr. Ernest O. Swartz has resigned from the staff of the James Buchanan Brady Urological Institute, Johns Hopkins Hospital, Baltimore, and resumed the practice of urology in Cincinnati.



# What Should Be the Attitude of Physicians Toward Health Insurance?

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Secretary Council on Health and Public Instruction, American Medical Association

WHEN one first takes up the study of so-called health insurance, he is confronted with an amount of evidence that is bewildering. The reports of the state commissions alone constitute a formidable mass of material. Since January 1, 1913, there have appeared in medical journals alone over 350 articles on this question. The literature on the subject in foreign countries is even larger. Masses of actuarial and statistical reports and innumerable pages of partisan controversy only add to the enormous mass of material from which writers on both sides of the question have drawn arguments and selected figures to sustain them, so that the reader is bewildered by contradictory statistics drawn from equally reliable sources. To add to the confusion, each group has viewed the subject largely from its own point of view and has discussed it almost entirely from the standpoint of its own interests. This is particularly true of physicians who have limited their discussion almost exclusively to the medical features of the plan and those which affect physicians, overlooking the fact that social insurance is essentially an economic and not a medical question, that the provisions affecting physicians are secondary details as far as the proposition itself is concerned, no matter how important they may be to us as physicians, and that to limit the discussion of the question by physicians to the medical features of the plan is equivalent to conceding the claims of its proponents on its social and economic features. Medical care and attendance are necessities of the plan, only in case such a plan is adopted. Naturally, if social insurance is not adopted, there is no necessity for medical attendance. A discussion of the details of medical services bears the same relation to the plan in general that a discussion of the interior decoration of a house bears to the question of the erection of a house itself. If no house is built, no decorations are needed. Until a man decides whether or not he will build a house, he naturally does not consider how he is going to decorate it. The chief criticism which can be made on the attitude of the medical profession on this subject so far is that we have allowed ourselves to be diverted into a discussion of secondary questions and as a result we have failed to consider the main and fundamental questions at issue.

## HISTORY

Let us first consider briefly the history of the proposed plan. Compulsory state industrial insurance, social or health insurance as it is vari-

ously called, originated in Germany in 1883. Responsibility for it is generally attributed to Bismarck, at that time the Chancellor of the German Empire, which he had created in 1872. Laws providing for different forms of state regulation, partial or complete, compulsory or voluntary, have, in the last 35 years, been adopted in various European countries. An enumeration of these is unnecessary. Disputants on this question are not even able to agree on its history and present status, the advocates of social insurance claiming that "universal health insurance is established in not fewer than ten of the leading continental countries of Europe" and the opponents claiming that this statement is a "gross exaggeration." Apparently the advocates of the plan are claiming everything that they choose to call social insurance and the opponents are refusing to recognize anything that does not conform to their own definition.

The historical question is of little importance to us. If a need for social insurance in this country can be shown, then the action of other nations is immaterial. Unless its need in this country can be demonstrated conclusively, it would be no argument in its favor to show that every other nation had adopted it. Aside from the main question at issue, however, we can learn something from the experience of the medical profession in England.

When Lloyd George was preparing his social insurance bill in 1910 he consulted the representatives of the labor unions, the individual employers, the national industrial corporations, the friendly societies (the analog in England of our fraternal and benevolent associations), social workers, the philanthropists and the politicians, everyone, in short, except physicians, whose services were indispensable in carrying out this measure. Apparently it never occurred to him to secure their advice or criticisms. Physicians failed to realize the significance of the proposed plan and the tremendous effect which it would have on the profession. This curious situation was probably due to the fact that for years the British medical profession had held itself aloof from the public and had had little, if any, influence on the framing of legislation on public health or social topics. It was consequently not until the bill had been drafted, introduced in Parliament and advanced to the second reading that the physicians of England woke up to a realization of the situation. Unfortunately, instead of opposing the measure on social and economic grounds, they devoted themselves almost entirely to those provisions of the bill which provided for the compensation of doctors and the relations between phy-

\*Read before the Michigan State Medical Society, Kalamazoo, May 25, 1920, and the Ohio State Medical Association, Toledo, June 1, 1920.

sicians and patients. This attitude naturally created the impression in the public mind that physicians as a class had no economic objections to the measure and that their only interest was in seeing that they secured as high a rate of compensation as possible for their services. As a result of this limited and essentially trade union attitude toward the measure, the medical profession of England had little, if any, influence in molding the main provisions of the bill and was obliged eventually to accept the terms offered.

In this country, the subject was first taken up by the American Association for Labor Legislation, a voluntary body with headquarters in New York and with about 3,000 members distributed through the different states. This Association had previously been active in urging the passage of several laws, notably workmen's compensation laws, which have been adopted in forty-two states. In December, 1912, it organized its social insurance committee, which in 1914 prepared a tentative draft of a health insurance act, which in 1916 was introduced in the legislatures of Massachusetts, New York and New Jersey. In 1917, the bill was introduced into twelve state legislatures. None of these fifteen states adopted the bill. Eight of them (California, Massachusetts, New Jersey, Connecticut, Illinois, Ohio, Pennsylvania and Wisconsin) appointed commissions to investigate the subject. In Massachusetts and California, two successive commissions were appointed, making in all ten official bodies which have made surveys, collected evidence, held hearings and issued reports on this question. In New York a reconstruction commission, appointed by the Governor, also considered this subject. Of these, in Massachusetts the first commission reported in favor of compulsory health insurance and the second commission reported adversely. In California both commissions reported in favor of the plan but on a referendum to amend the state constitution so as to permit of the establishment of compulsory state health insurance, it was defeated by a vote of 358,324 to 133,858. In New Jersey and Ohio the commissions reported favorably. In Connecticut, Wisconsin and Illinois the majority of the commissions reported against it. In Pennsylvania the commission recommended further study and investigation. In New York, the Governor's commission reported favorably.

#### THE PLAN PROPOSED

So much for the history of the movement in this country. Let us now ask what is this proposed plan, stated in its simplest terms. The standard bill drafted by the American Association for Labor Legislation can reasonably be taken as an authoritative statement of the proposed scheme. It provides that all employes earning less than a given amount shall be entitled to medical, surgical, hospital and nursing care, dental treatment, maternity benefits, cash benefits and funeral allowances. These services are to be paid for out

of a fund of which the state furnishes one-fifth. Two-fifths are to be contributed by the employe in the form of compulsory payments of a certain percentage of his wages, variously estimated at from 3 to 7½ per cent. and the remaining two-fifths are contributed by the employer in the form of compulsory payments of about the same percentage of his payroll. This fund is to be administered by a local board for each group of 5,000 employes, to be composed of an equal number of representatives of employers and employes, all the local boards to be under a state commission which will determine the conditions of medical treatment, terms of compensation to physicians, etc.

Regarding the details which vary in different bills, but which do not change the principles involved, the maximum annual income as fixed by the British law was approximately \$800.00 a year. That is, only employed persons whose gross annual income was \$800.00 or less came under the compulsory provisions of the law. This has since been raised to \$1,200.00. In the model bill drafted by the American Association for Labor Legislation, the maximum amount is \$100.00 a month. In the Donohue-Davenport bill in New York no limit was specified. The proportionate amounts to be contributed by the three parties also vary in different bills. The amount contributed by each employe is fixed by a sliding scale in accordance with which the amount contributed by the employe decreased and that contributed by the employer increased as the weekly earnings decreased in amount. Employes receiving less than \$5.00 a week pay nothing, the employer paying 80 per cent. and the state 20 per cent. Details regarding medical services also differ. Medical and surgical attendance is provided either by the appointment of certain physicians as whole time insurance physicians, or by the creation of a panel or list of physicians in each district willing to care for those insured. Proposals for the compensation of physicians also differ. The payment to each physician of a fixed salary, an annual pro rata division among all the physicians on the panel of the amount appropriated for medical and surgical services for the district or a capitation system by which each physician is paid in accordance with the number of persons treated or the amount of work done during the year, are among the plans proposed.

Such is the plan in its briefest terms. Endless discussion has taken place regarding details, with the result that the fundamental features have become obscured and lost sight of. What are the arguments made in favor of it?

#### ARGUMENTS FOR THE PLAN

The brief on the model bill prepared by the American Association for Labor Legislation claims that there is at present a disproportionately large amount of sickness among employed persons causing immediate loss of time and wages



and resulting eventually in incapacity and poverty; that there are as nearly as can be estimated 3,000,000 persons in the United States sick at any one time; that each of the 30,000,000 wage earners loses approximately nine days a year through illness; that the resultant annual wage loss amounts to half a billion dollars; that the wages paid American working men are inadequate to enable them to meet the expense of sickness and to bear the losses consequent on sickness and incapacity; and that it is therefore necessary to distribute this burden among three parties; viz., the employe, the employer and the state. The objects of the proposed plan are, therefore, primarily two: viz., to reduce to a minimum the amount of time lost by workmen through sickness and to divide between the state and the employer 60 per cent. of the cost of the illness of employes, leaving 40 per cent. for them to carry as their share.

#### EVIDENCE PRESENTED

It is impossible to discuss in detail the evidence presented by the advocates of social insurance in support of their proposition. It can only be pointed out here that all of the statements made above rest on estimates or opinions and not on facts. There are no figures in existence showing the death rate in the United States from different causes, the death rate in the United States among different social and industrial classes, the amount of sickness in the United States for any given period or class, the average income of workmen in the United States or the average amount of time lost by workmen through illness. Statements on these points are based on estimates made to prove widely different claims on both sides of the question. These estimates are compiled in various ways. Some are based on studies of small groups, the general conclusions drawn from these small groups being then expanded and applied at proportional rates to the entire population. Another favorite form of manufacturing statistics in this field is to assume that the mortality and morbidity rates, average annual incomes and average losses through sickness in one country or at one time can be applied without modification to another country at a different period. Such methods are clearly fallacious and untrustworthy. Statistics collected in Frankfort or Leipzig in 1887 are of no value in New York, Ohio or Illinois in 1920. Intensive study of a comparatively small group of families in the tenement house district of Chicago can hardly be accepted as representative of the entire population of the state. Conditions found in an old, densely settled manufacturing state like Massachusetts are of no value in discussing problems in comparatively young farming states like Kansas and Nebraska. Careful examination of the material produced as evidence shows that there are no reliable data on which to base general statements on this question. The only way in which acceptable evidence

can be secured is by a comprehensive and exhaustive state-wide survey of the state in which the proposed plan is under discussion, made not to secure evidence to support a preconceived theory, but rather to obtain facts as to existing conditions as a basis for whatever constructive action may be necessary. Such a survey has not yet been made in any state. Too often the advocate of any plan regards all statistics in favor of his proposition as conclusive and all evidence against the plan as unsatisfactory. One of the leading advocates of social insurance in a recent summary of the findings of the official health insurance commissions states that of the eleven official reports, four, viz., California, Ohio, Pennsylvania and Illinois, "represent thorough going studies of the problems of health insurance" and that the investigation made by the Illinois Commission was "probably the most thorough going of all," yet this investigation only covered forty-one blocks in Chicago, containing approximately 3,000 families, of which only 9 per cent. are reported as having deficient incomes; while the report itself immediately after recommending compulsory health insurance says, "The findings of this section are not presented as absolutely conclusive and final. They must be weighed in the light of the necessary limitations of the hypothetical application of assumed standards to an actual situation considered as unaffected by their introduction. The evidence presented is largely circumstantial and presumptive and should be accepted with due reservation for this fact." If this is the view which the investigator had of the value of his own investigation, it is not strange that it failed to convince the Illinois Commission. Yet this report is put forward by the advocates of social insurance as "the most thorough going of all."

Great importance is also attached to the reports of the California Commission. The report of the second commission is largely confined to a discussion of methods and standards, assuming without warrant that the underlying principles are proved. The first report, however, discusses the fundamental questions involved. While the general conclusions as stated are sweeping, the body of the report itself affords no basis for such conclusions. In fact, the commission repeatedly acknowledges its inability to secure any reliable information. The report says, "There is practically no scientific information bearing on this important question of unemployment." "The attempt on the part of the Commission to discover the average number of weeks of employment secured by the worker in the leading trades in San Francisco proved a failure from the standpoint of accurate statistics." "The economic loss to the community resulting from the aggregate number of working days wasted through sickness can merely be guessed at." The Pennsylvania Commission, consisting of three members from each house and three appointed by the Governor, del-

egated practically all of the work to two women who were limited in time to three months and in money to \$5,000.00. The material contained in this report is almost entirely compiled from other sources and contains but little original data, while the investigation is far too superficial and incomplete to justify placing a new, untried and expensive burden on the state.

A careful study of the evidence presented in favor of health insurance and its relation to the assumptions drawn therefrom by the advocates of the plan would be extremely interesting if time permitted. It can only be said here that the evidence as contained in the official reports is not "overwhelming," neither does it clearly indicate the need for social insurance, as claimed by its advocates. On the contrary, the evidence is fragmentary, incomplete and unconvincing and many of the conclusions drawn are not justified by the evidence.

#### INCONSISTENCIES OF THE PLAN

Let us now examine the plan itself to determine definitely just what it is and what it is not.

In the first place, it is not insurance. The essential principle of insurance is the distribution of loss from any cause among a large number of persons *subject to the same risk*, so that the cost of the loss to any one will fall proportionately on all. For instance, 100,000 men owning houses, all of which have practically the same liability to destruction or injury by fire, either by mutual agreement or by taking out policies under a corporation, prorate among the entire number exposed to the same risk any losses that may arise to any one of the number, so that the loss of each one is distributed among the entire group rather than borne by the individual. This is insurance. But if outside parties, not subject to the risk, assume a part or all of the loss, it ceases to be insurance and becomes a subsidy. The proposed plan is not insurance since it does not distribute the loss among those exposed to the same risk, but brings in two parties in no way sharers of the risk, viz., the employer and the state. If anyone proposed a plan to divide the cost of loss and damages to automobiles among the owners of the machines, the automobile manufacturers and the state, it would be hard to convince anyone that such a scheme was insurance. If the proposed plan provided for distribution of the entire cost of illness of employes among themselves, either mutually or through a supervising corporation or the state, then it would be insurance. As it is, it is simply a method of taxing all the citizens of the state, either directly or indirectly, to furnish medical and surgical services to maintain the productive efficiency of part of the population. All the cost will ultimately come on the consumer and the citizen. Neither the employe nor the employer, as such, will bear any part of the expense. What would happen if such a plan were adopted in any state? The workman,

finding that a certain amount was deducted from his wages each week, would immediately demand that his wages be increased enough to make good this deficit. This increased wage would be added to the operating expenses of the plant. The employer could hardly be expected to pay his assessment out of his profits. He would add his share to the operating expense account. So that the cost of production and the cost of the product to the consumer would be increased by the addition of whatever amount both the employes and the employers were compelled to pay and would ultimately be paid by the consumer as an indirect tax as a part of the price of the commodity. The one-fifth contributed by the state could only be paid out of the state treasury through money secured by taxation of its citizens. The proposed plan, therefore, is not insurance at all, but is simply a plan for providing medical, surgical and hospital care in order to increase the industrial output of a portion of the population at the expense of the entire citizen body, through direct and indirect taxation.

In the second place, the proposed plan is not *health* insurance. It is a plan whereby the amount of time lost by employes through illness may be reduced to a minimum and the productive efficiency of each employe may be maintained at the maximum. The object is not the maintenance of health but the maintenance of productive efficiency. The plan proposed is neither a medical nor a public health proposition; it is purely an economic measure, intended to maintain the efficiency of the employe and the productiveness of the industrial plant at the highest possible point. The health features of it are secondary and incidental. The term, health insurance, therefore, is a misnomer. *Instead of being called health or social insurance, it should be called taxation for the increase of industrial production.*

In the third place, contrary to popular opinion, the proposed plan is not intended for the relief of poverty and unemployment. In England, which has probably the most elaborate system for poor relief laws of any country, the operation of the Poor laws has not been altered by the adoption of social insurance. The proposed plan only cares for those who are employed and who are drawing wages. Those unemployed at the time such a law would go into effect and those incapable of supporting themselves are in no way provided for under such a plan and must be cared for through voluntary philanthropy or by state charitable institutions as at present.

In the fourth place, it is unsuited to social, economic and political conditions in this country. It is undemocratic in that it divides the American people into two classes, viz., those who work and those who do not work. In European countries, classes are fixed and stationary. A man is born into a certain class and remains in it through life. If he is born into a wage-earning family, he becomes a wage earner and remains so throughout



life. In this country we have no such class distinctions. The employe of today is the employer of tomorrow and the member of the leisure class of the day after. He is not only able and willing, but eager to bear his own responsibilities, to assume the burden of his own mistakes and misfortunes and to reap the result of his own enterprise and energy.

#### IS IT INEVITABLE?

Two statements which have been repeatedly made regarding the proposed plan deserve specific mention at this point. The first is that health insurance is inevitable. This statement has been made repeatedly by the advocates of social insurance until it has come to be accepted even by doctors as axiomatic. Yet there is not the slightest basis for such an assumption. Such a plan can only be adopted if a majority of the people of the state or a majority of the members of the legislature of the state vote in favor of it. It is no more inevitable than is the adoption of any other proposed measure.

Another statement is that social insurance is the legitimate successor of workmen's compensation and that as laws on this subject have now been adopted by most of the states, the adoption of a social insurance bill in each one of these states is logically the next step. This statement shows a lack of discrimination regarding the underlying principles of the two propositions. Workmen's compensation laws are based on the general principle that an industry should bear all the expenses incident to carrying it on and that injury or impairment of the efficiency of employes is a legitimate charge on the industry, just as is the wear and tear on machinery. Workmen's compensation laws simply substitute statutory enactment for judicial decision and a definite plan of adjustment for the individual action of a jury in each case. The two propositions have nothing in common.

#### FOUR PROPOSITIONS

Accepting the proposed plan for the sake of the argument, however, and waiving these objections for the time being, when the plan is carefully analyzed and all the non-essential features eliminated, it is seen to rest on four propositions, all of which must be proven in order to establish a case. The claims of the advocates of this scheme are:

1. There is a disproportionate amount of sickness among employed persons causing financial loss, incapacity and poverty greater in proportion than that sustained by the average person and requiring special methods of relief. Until this is proved, there is no justification for special laws for employes.
2. The financial burden caused by sickness is heavier than the average employe is able to bear. Until this is proved, there is no reason to assume that he cannot carry his own burden.
3. Present methods of promoting public health

and controlling disease are not adequate. Until this is proved there is no need of devising any new plan.

4. Compulsory state supervised sickness insurance is the best remedy for this condition. Until this is proved, it is possible that some other remedy may be better.

#### BURDEN OF PROOF ON ADVOCATES

As soon as the case is stated in this categorical form, it is at once seen that the burden of proving these four propositions lies with the advocates of social insurance. No one of the four propositions involved has been proved. Neither is there at present any conclusive evidence or any mass of statistics or data by which any one of them can be proved. It is not known and there is at present no way of knowing how much illness or incapacity exists, either among employed persons or among any other class of our population. It is not known and there is at present no way of knowing what is the average wage. It is not known and there is at present no means of knowing whether the burden of illness is or is not heavier than the average employe can bear without assistance. It is not known and there is at present no means of ascertaining whether existing agencies are adequate or not. Finally the claim that social insurance is the best remedy for existing conditions is a pure assumption. Statements as to the number of persons sick in the United States at any one time, among wage earners or any other class, or among the population as a whole are based entirely on estimates and not on proved facts. We do not even know how many deaths there are in the United States in any one year, and we have absolutely nothing except *ex parte* estimates as to the amount of illness. The Registration Area of the United States Census, which includes those states and cities which have complete returns on deaths, included for 1919 only 79.7 per cent. of our population. In the present stage of our knowledge of health conditions in this country, it is impossible to make any positive statements as to the amount of sickness, either among employes or any other class. The average amount of time lost each year through sickness on the part of wage earners is not known. Estimates on all these points differ widely, depending on which side of the question they are intended to prove.

For instance the brief prepared by the American Association for Labor Legislation states that approximately nine days a year are lost on account of sickness by each employe. On the other hand, Mr. Mark A. Daly, General Secretary of the Associated Industries of New York State, presented figures drawn from the payrolls of one of the largest associations of employers in this country, showing that in July, August and September of 1919, out of 131,146 employes of three hundred firms, 3.2 per cent. were absent on account of illness, while 3.9 per cent. were absent

for personal reasons; that the number of hours lost for illness were 336,468½ or about 10 hours per employe per year, a little more than a day, while the number of hours lost for personal reasons were 357,931½. Mr. Daly's figures are of course, for a short period of time and for a limited group. They are, however, a definite statement drawn from actual record rather than an estimate based on general considerations. The wide divergence between these figures and those presented by the advocates of social insurance tend to show that today no one knows how much time is lost through sickness among wage earners throughout the country and that it is impossible to make any dogmatic statements on this point.

The second proposition which is assumed by the proponents of social insurance is that whatever may be the financial loss sustained by workmen through illness, it is a burden which it is beyond the power of the individual workman to carry or as stated in the argument of the American Association for Labor Legislation, "Wage studies show that the slender savings of workmen are inadequate to meet the burden of sickness." In proof of this fact is quoted the report of the United States Immigration Commission for 1909 which states that sickness was the apparent cause of poverty in 38 per cent. of the charity cases studied. Let us examine this statement and see what it involves. The argument of the proponents of social insurance is that the average American working man is not paid a sufficiently high wage to enable him to bear the expense of the average amount of illness without being pauperized thereby and that he must have state aid to bear the burden. Mr. Daly showed that wage loss for three months for 131,146 employes was \$1.06 each and that the annual loss for each workman in the employ of members of his association was \$4.24 a year, about one day's wages. The New York State Industrial Commission in its official report shows that in November of 1919 the average weekly earnings of factory employes in New York State were \$25.37 and in December of the same year, \$26.32, or \$1,368.64 a year. This is on the basis of a six day week. According to these figures the average loss in a year through illness for each of these employes would amount to about one day's pay or 1-312th of the annual income. This would hardly seem to be a burden which the average working man cannot carry without assistance from the state. The Bureau of Labor Statistics of the United States Department of Labor in its report for November, 1919, presents an exhaustive tabulated report on the cost of living in the United States in which figures are presented showing the actual expenditures of 848 families in 60 cities in various parts of the country, each family consisting of five persons, man and wife and three children. After presenting the cost of housing, food and clothing, an elaborate tabulation of miscellaneous expenses in thirty or one-half of the cities is shown. One

heading gives the annual expenditure per family for sickness, including under this heading not only medical and surgical services, but also oculist, medicine, nurses, hospital care, dentist, eye glasses, etc. The total expense for this purpose for the average family of five persons a year is \$61.09, or \$12.21 per person per year. Under another heading is tabulated the money spent for amusements, including movies, theaters, concerts and excursions. This amounts to an average of \$18.66, while the average expense for churches, lodge and society dues, charities, etc., amounts to \$34.73, making a total average spent each year for amusements and benevolences of \$53.39, or an average of \$10.67 per person per year. If the average family spends \$61.09 a year on account of sickness and is still able to spend \$53.39 a year for amusements and benevolences, is it in need of state aid in order to enable it to carry the burden of its sickness expense? And if it is in need of state aid to carry one expense, why is it not equally in need of state aid to carry the other and why should we not have a compulsory plan for taxing all the people of the state in order to relieve the employe of three-fifths of the burden of excursions and moving picture shows?

The Daily News Almanac for 1920 shows that in 1918, the last year for which figures are available, there were in the United States 1819 savings banks with 11,379,553 depositors, having deposits amounting to \$5,471,589,948.00, or an average of \$446.94 for each depositor. As it is estimated that there are approximately 20,000,000 families in the United States, apparently approximately one-half of them have savings deposits and reserve funds.

It may be argued that these figures are no more conclusive than those presented by the proponents of social insurance. This is quite true. Neither are they intended to be either conclusive or comprehensive. They are presented, however, with a view to establishing two assertions: First, that the statements on which the entire argument in favor of social insurance rests are assumptions and deductions based on insufficient evidence and that there is quite as much evidence against them as in favor of them; and second, what I wish to emphasize as a basis for an argument on another subject later on, that the principal difficulty in the discussion of any large questions of public health in this country is lack of authoritative and comprehensive data on the fundamental questions involved.

#### PUBLIC HEALTH AND DISEASE CONTROL

The third essential proposition, viz., that present methods of promoting public health and controlling disease are inadequate, involves a discussion of the entire question of present methods of medical practice and public health promotion. This would obviously involve too much time and take us too far afield. Its discussion would require a study of morbidity and mortality rates throughout the country compared with those of previous years



and with other countries, together with a comparison of methods of medical practice and of public health organization and administration in this country and abroad. Here again, while there is an immense amount of data available for consideration, no definite, positive and reliable figures are obtainable. In other words, on this question, as on the two preceding points involved, we do not possess the knowledge necessary to enable us to make definite and positive statements. Here again, the burden of proof lies on the advocate of the new plan.

#### FIVE POSSIBLE ALTERNATIVES

Of the four essential propositions on which the proposed plan rests, the first three cannot be determined owing to insufficient knowledge. But even if all three were conceded, the fourth point would still remain to be proved. *The claim that health insurance is the best remedy is a pure assumption.* Even if it could be shown that employes as a class are suffering from an undue share of illness, than the financial cost is greater than they can bear without assistance, and that present methods for remedying this situation are inadequate, it still remains to be proved that so-called health insurance is the best remedy. At least five alternatives besides compulsory state insurance must first be considered. These are:

1. An increase in the wages paid to employed persons so that each one will be in a financial position to bear his own burdens without need of assistance from the state. This is the economic remedy.

2. The development of state, municipal and local health agencies to a point where preventable diseases will be reduced to a minimum and the burden lightened by reducing the amount of sickness. This is the public health remedy.

3. The development of voluntary thrift and savings habits among employes to a point where through increased thrift and foresight they may be able to provide for their own emergencies. This is the personal remedy.

4. The development of voluntary industrial insurance on the part of employes and employers in industrial corporations and groups. This is the co-operative industrial remedy.

5. The development on the part of wage earners and employes themselves of voluntary assessments and benefits through trades unions, benefit associations, etc., for their own protection. This is the co-operative social remedy.

All of these are possible alternatives to compulsory social insurance involving the development of existing methods. Naturally they must be given careful consideration before any new and untried scheme is considered. Just as the surgeon would naturally consider every alternative method of treatment for a condition before advising and performing a radical operation, so the possibility of the development of existing methods to a point where they will be adequate must

be considered before any new and untried method is adopted.

It is probable that this problem of economic loss to employed persons through illness, when it can be definitely defined and limited, will be solved by a combination of all of the five methods suggested rather than by any single one. In fact, the first alternative as stated above has well nigh eliminated the problem. Since 1914, when the agitation for compulsory social insurance in this country began, the increase in wages has practically taken the American working man out of the field of compulsory social insurance as proposed at that time. When this plan was first proposed, the maximum limit under the British law was \$800.00 a year, i. e., all persons with an income exceeding this amount were exempt from the operation of the health insurance act. The American Association for Labor Legislation evidently felt that it was making a large concession to different conditions in this country when it fixed the maximum limit at 50 per cent. higher than the British law, or \$100.00 a month. Yet today how many American working men are there whose gross annual income is below this amount? Figures on this subject are so numerous and popular knowledge so general that it is hardly necessary to argue the point. A few illustrations, however, may be cited.

The American Medical Association, in publishing its journals, operates probably the largest exclusively medical plant in the world. There are at present on the payroll of the Association 285 persons, of whom 120 are employed in the printing department. In 1906 the union scale for printers was \$17.50 a week. In 1916 it was \$24.00 a week. Today it is \$46.00 a week, or \$2,392 a year, approximately \$200 a month. The journal has one night pressman who draws \$250 a month. Out of 50 employes on one floor of the journal plant ten own and drive automobiles. Most of them own their own houses and several have flat buildings and houses for rent. In 1915 the printer's apprentices, or young boys learning the trade, generally boys living at home, were paid under the printer's scale \$6.50 a week. They are now paid \$14.00, or within \$3.50 of the scale for the full fledged journeyman printer ten years ago. Packers' boys in the pressroom who used to receive \$10.00 a week are now getting \$22.50 and \$25.00, more than the highest paid printers in the plant received ten years ago. As the scale for the printing trade is practically the same all over the country, it will be seen that the average printer earns twice the minimum wage specified in the social insurance bill and that the printing trade would not be in any way affected by the proposed plan.

The same thing is true in the building trades. Chicago last year experienced a long drawn out strike on the part of the building trades unions for a dollar an hour for an eight-hour day, with \$1.50 for overtime. This was finally given to

them and within six months the carpenters secured an increase to \$1.25 an hour or \$10.00 for an eight-hour day. Today building in Chicago is greatly hampered on account of the inability to get carpenters at this price, as Detroit with an equally urgent building problem is drawing practically all the carpenters away from Chicago by offering them \$1.50 an hour or \$12.00 a day for an eight-hour day. I recently had occasion to go down on West Madison Street near the river where the large employment agencies are located and noted the signs displayed in front. Ordinary unskilled day laborers are offered \$4.00 and \$5.00 a day. One placard called for a night fireman of a heating plant at \$125.00 a month. Several weeks ago I drove fifty miles through the richest farming part of the State of Illinois commonly known as the corn belt. I learned that ordinary farm hands were now paid \$70.00 a month with room, board and laundry. Window washers in Chicago are now getting \$36.00 a week, or \$6.00 a day, and are about to strike for \$40.00. Washwomen and scrub women are getting \$4.00 a day. A telegram from New York appeared in a morning paper the other day to the effect that John D. Rockefeller was offering \$4.00 a day for ordinary labor on his country place and was unable to get it, as neighboring employers were paying \$5.10, or \$1.10 higher than Mr. Rockefeller for ordinary unskilled labor. Obviously, conditions here and in Germany are not comparable. In a letter which was read in the Senate and which appeared in the Congressional Record for May 1, 1920, Mr. F. Herbert Chamberlain, President of the Haydon Chemical Company of Garfield, New Jersey, writing Senator Frelinghuysen regarding the development of the dye industry in this country, states that he spent several weeks in Germany in the fall of 1919 studying the aniline dye industry in that country and that the Badische Anilin und Soda Fabrik plant employing 16,000 working men is paying them today wages that at the present rate of exchange are approximately nine cents an hour for an eight-hour day and this rate has existed only since June, up to which time they were receiving only eight cents an hour. He also states that in this country working men in similar plants are receiving 40 to 50 cents an hour for the same work. Disregarding for the time being the other proposed remedies for whatever situation may be proved to exist, it seems evident that the average American working man today is far beyond the economic stage where he needs compulsory state insurance to enable him to bear the burden of whatever sickness he may experience, and that any compulsory insurance law with any such limit as the model bill of the American Association for Labor Legislation, viz., \$100.00 a month, would today include no one but boys, office girls and domestic servants.

#### "NOT PROVED"

If the arguments which I have endeavored to develop are sound, then it must be admitted that the advocates of health insurance have failed to make out a case for their proposal. The burden of proof is on the proponents of the plan. It has not been shown that so-called health insurance is needed, that it would be any improvement over present conditions or that it is the best remedy for existing conditions. Until convincing and conclusive evidence on these essential points can be produced, backed up with statistics of a sufficiently broad scope to be acceptable as proof, the decision as to the value and desirability of the proposed plan must be the Scotch verdict of "not proved."

#### ATTITUDE OF THE MEDICAL PROFESSION

What should be the attitude of the medical profession on this subject? In order to answer this question, it is necessary to consider it from the standpoint of the public rather than from the standpoint of physicians. The proposed plan as we have seen is a question of public policy and not a medical problem. It is going to be settled by the people either directly or through their legislatures and not by the medical profession. The American people are the jury in this case. We must, therefore, consider the subject from their point of view.

The attitude of the organized medical profession has been definitely and officially determined. The American Medical Association at the New Orleans session last month adopted by a practically unanimous vote a resolution declaring its opposition to any plan of compulsory, contributory insurance against health or any other plan of compulsory insurance provided, controlled or regulated by any state or the federal government. A number of state associations have adopted similar resolutions. The attitude of the organized medical profession as determined by its duly elected representatives is, therefore, unqualified opposition to compulsory state health insurance.

But it is claimed by the advocates of this plan that it is really a public health measure of the greatest importance and that its adoption will result in improved health conditions and increased efficiency. Shall the medical profession, which has for the last fifty years led in the development of public health, take an attitude of opposition and obstruction rather than of advancement and construction? Such a policy would be contrary to the traditions and instincts of our profession. It would furthermore be a relinquishment of our leadership in public health. Nor is it necessary for us to adopt any such attitude. If the arguments and reasoning which I have endeavored to present are sound, then the attitude of the American medical profession on this question is clear. We have shown that so-called compulsory health insurance is not a public health measure. Yet a considerable share of the support



that it is receiving is due to the honest belief on the part of many of its supporters that it is a measure for the improvement of public health conditions and to this extent it must be regarded as a part of the popular movement for health conservation. So that while it is our duty, as the leaders and advisers of the people on health matters, to oppose this plan because we have no reason to believe that it will accomplish the good which its supporters anticipate, it is equally our duty to point out the true line of progress and to utilize the energy now being expended in the wrong direction by turning it in the right direction. If we are going to oppose health insurance and prevent its adoption, as we surely can if we place the facts before the public, we must, in order to keep faith with the public, be prepared to present an alternative proposition which will accomplish all the good claimed for social insurance without any of its defects.

In the last fifty years, scientific medicine has made greater progress than in any preceding 500 years. Yet our methods of practice as far as the economic side of medicine is concerned remain unchanged. Everyone admits that there must be readjustment in the methods of medical service. Health insurance is only one of many solutions proposed. Which is the best? We do not know. We do not have the essential facts on which to base an opinion. As scientific men, we must investigate and then arrange and study all the facts before we can form an opinion. This is the true scientific method.

The fatal defect of social insurance, so far as this country is concerned, is that it provides for a part rather than for the whole. The principal defect in the argument of its proponents is that there are no data available on which to base a sound argument. This situation is one which has always confronted the advocates of public health legislation. We have not known in the past nor do we know today the physical, economic and social conditions existing in the various states, which effect the health and the efficiency of our people. Our entire public health program which has been built up in the last fifty years, while based on the best available information, has been hampered and delayed by lack of definite, positive knowledge regarding the prevalence of disease and the physical condition of our people. This fatal defect in the argument for social insurance has also been the greatest obstacle in the development of effective and adequate public health organization and administration. The rational, sensible plan to follow in creating and developing a health administrative body, whether federal, state or municipal, would be first to inquire as to the need and the amount of work to be done and then to plan the machine in accordance with the work to be accomplished. This is the practical, business-like method of procedure which must instantly commend itself to everyone. Yet it has in no instance been followed in

the development of public health in this country. A lack of definite, accurate and reliable information is today the chief obstacle in the way of the reorganization of our federal public health activities and in the development to their highest efficiency of all of our state and municipal health organizations. The agitation for the passage of so-called health insurance laws in the different states gives us an unusual and unprecedented opportunity to impress on the public and the legislatures the lack of positive knowledge on physical and social conditions, the importance of developing our state public health activities along rational lines and to the fullest extent and the absolute necessity of securing complete information regarding health questions as a basis for such reorganization.

#### TO THE LEGISLATORS AND THE PUBLIC

To the legislators and the public of these states in which bills for compulsory state health insurance may be introduced, the medical profession may say, "We recognize the plan proposed in this bill as an effort on the part of its advocates to improve health conditions. The plan proposed, however, is not in reality a health measure and is not suitable for this country in that it affects only a portion of our population and is based on class distinctions that are undesirable in this country and not in harmony with our institutions. It provides only for wage earners of a certain class and is, therefore, undemocratic and unwise. The plan is further objectionable because it seeks to develop public health administration through a new and independent body rather than through the recognized and legally constituted health authorities of the state. It is not possible for the advocates of this measure to prove their claims owing to the lack of definite knowledge regarding the sanitary, social and economic conditions which are affecting the health of our people. This ignorance on questions of the utmost importance to our people is also an obstacle in the development of our state health activities. The medical profession is deeply interested, as it always has been, not only in the health of the wage earner, but also in the health, well-being and efficiency of every man, woman and child in the state. It is the duty of the state to protect every man from disease, whether he be employe or employer, wage earner or factory owner, millionaire or pauper, and to enable him to secure and retain to the utmost good health, efficiency and long life. But such state public health work should be for the benefit of every citizen and not for any class. It should be in the form of united action by the people of the state for self-betterment rather than in the form of pauperizing subsidies and emasculating sick benefits. It should be carried on through the legally constituted health authorities of the state and not through a board of representatives of special classes. It should be based on the widest, fullest and most complete knowl-

edge obtainable regarding existing conditions in this state and their bearing on the present physical condition of every man, woman and child therein. As scientific medical men we demand that any measures for the improvement of our citizens be based on proved facts and not on unproved theories. We, therefore, ask that, instead of adopting this incomplete, undemocratic and ineffective measure, the state legislature appropriate a sufficient amount of money to enable the state board of health to make a complete and exhaustive study of the entire state, showing the amount of sickness existing among our people, the causes therefor, as fully as it may be possible to

determine, the social, economic and industrial conditions existing in the state and their influence on the health of the people, together with any other facts which may be pertinent and to submit a report at the next session of the legislature showing the exact conditions existing, together with recommendations as to how the existing health organization of this state may be increased and developed to a point where every citizen of the state, regardless of his economic condition or industrial status may be protected from disease and may enjoy the highest possible degree of good health, efficiency, happiness and long life."

## OHIO HOSPITAL NOTES

Since the pay-patient act became effective in state hospitals in 1910, a total of \$3,659,415.20 has been collected by the state, according to a report just completed. Receipts for 1919 amounted to \$606,114.12, distributed as follows: For the care of feeble-minded, \$305,071.40; Mt. Vernon Sanitarium, \$9,351.36; all other, \$291,691.36. For the support of feeble-minded, of the total of \$305,071.40, counties paid \$284,295.56 and individuals paid \$20,775.84. Collection of the fund under the present law is with the associated charities, but an effort will probably be made at the coming session of the legislature to have the law so amended that this work may be done under the direction of the State Board of Administration.

—A bond issue for the erection of a city hospital in Portsmouth passed by a large majority in the November 2nd election.

—Plans for the establishment in Dayton of a non-sectarian, charitable hospital similar to the Jewish Hospital in Cincinnati, are being considered. An option has been obtained on ground in Dayton View. It is estimated the project will cost \$200,000.

—The volunteer medical and surgical staff of the Ohio Soldiers and Sailors Orphans' Home, Xenia, has been enlarged by the appointment of Dr. B. C. West, Dayton, to the chair of physical diagnosis, and Dr. Lawrence Shields, Xenia, to the chair of nose and throat. Dr. William A. Galloway has been elected dean of the board and Dr. A. C. Messenger, Xenia, secretary.

—Since Stark County sold its interest in Springfield Lake Sanatorium eight months ago, taxpayers of the county have been saved \$8,000 in the cost of caring for tuberculosis patients, the county commissioners say. Since that time Stark County has been sending some patients to Springfield Lake under contract and some to the

Mt. Vernon Sanatorium and the cost per patient has been decreased by half.

—Work on the new nurses' training school at Mt. Carmel Hospital, Columbus, is progressing rapidly. Two upper floors of the six-story building are already occupied by the nurses, while the interior of the lower floors is being completed. Removal of the nurses from the hospital building proper to the new structure will relieve congestion and enable the institution to care for 205 patients.

—The Women's Hospital, Cleveland, an institution of 75 beds, was formally opened November 30. The hospital is an extension of the Women's and Children's Dispensary founded 35 years ago, by Dr. Myra K. Merrick.

—The sixth floor of the Mercy Hospital, Toledo, has been rearranged to accommodate the clinical and X-ray laboratories, a plaster room, a genito-urinary room, and an additional treatment room. Staff meetings, discontinued during the summer, have been resumed. Attendance at these meetings is large and an enthusiastic spirit of cooperation is exhibited.

## Anti-Venereal Disease Campaign Continues

Ohio's fortieth venereal disease clinic was opened November 15 at Ironton, with Dr. O. H. Henninger as clinician in charge. The clinician's salary is paid by the State Department of Health from the joint state-federal venereal disease control fund. The state also provides free arsphenamine.

Clinics receiving federal and state subsidy are being operated in Cleveland, Toledo, Lima, Youngstown, Columbus, Canton, Hamilton, Cincinnati, Dayton, Chillicothe, Portsmouth, Akron, Warren and Springfield. In addition to these publicly-maintained clinics, hospitals in several cities offer free treatment facilities, several state institutions are treating their inmates and several private hospitals receive a limited number of free venereal disease patients.



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## Deaths in Ohio

*William George Ebersole, M.D.*, Western Reserve 1897; aged 56; died at his home in Cleveland, October 5. Dr. Ebersole was also a dentist and at one time served as president of the Cleveland and Northern Ohio Dental Societies. He leaves a widow and one son.

*Samuel Ernest Kaestlen, M.D.*, Western Reserve University School of Medicine, Cleveland, 1890; aged 56; former member of The Ohio State Medical Association; died at his home in Cleveland, October 30, after an illness of several months.

*William H. McIlvain, M.D.*, Western Reserve University School of Medicine, 1870; aged 78; died at his home in Kenton, October 12. Dr. McIlvain was a veteran of the Civil War in which he served as a member of Company I, 11th Indiana Volunteer Infantry. He had practiced medicine in Kenton since 1882. His widow survives.

*Z. Blish Sawyer, M.D.*, University of Wooster, Medical Department, Cleveland, 1875; aged 67;

died October 14, from injuries received when he was struck by a train at Willoughby. Dr. Sawyer was a native of Lake county, but had lived in the west for some time and only recently returned to accept a position as director of the medical department of an industrial plant at Willoughby.

*Albert Freeman Snell, Jr., M.D.*, Eclectic Medical College, Cincinnati, 1914; aged 32; died at Grandview Sanatorium, Cincinnati, October 29. Dr. Snell was a member of the Army Medical Corps during the World War. He was a son of Dr. Albert F. Snell, Sr., a resident of Cincinnati and Cleveland.

*Schuyler B. Tuthill, M.D.*, Medical College of Ohio, Cincinnati, 1891; aged 54; former member of The Ohio State Medical Association; died October 7.

*Ira L. Wyant, M.D.*, Cleveland University of Medicine and Surgery, 1894; aged 40; died at his home in Norwalk, October 26. Dr. Wyant practiced medicine in Chesterfield for 12 years before locating in Norwalk in 1906. He is survived by his widow and one daughter.





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\* \* \*

The Eye, Ear, Nose and Throat Section of the Toledo Academy met on October 22, with Dr. Alter in the chair. The program consisted of a paper on "The Hysterical Throat," by Dr. Hubbard, and one on "Sinus Thrombosis," by Dr. Steinfeld. Papers are abstracted below:

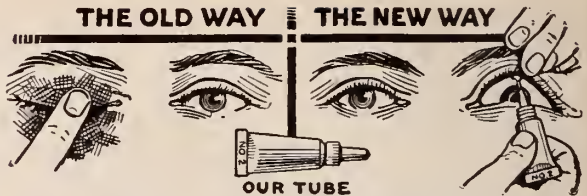
#### THE HYSTERICAL THROAT

Hysteria is a psychoneurosis in which morbid ideas and introspection produce symptoms simulating organic disease. The sensitive nerve plexuses of the throat make it liable to neurosis simulating disease and the laryngologists must be keen to detect the stigmata of hysteria. A conclusive negative finding is of great service to the patient. Treatment which encourages concentration on anatomical regions tends to perpetuate the hysteria habit. Accidents which tend to annul normal inhibitions may cause a train of hysterical symptoms. These will some times be transient but often permanent. Dysphagia is a common symptom and when cultivated can even lead to convulsions. The neurasthenic tendency to exaggeration of symptoms is nearly always present. Hysterical anesthesia and paraesthesia are common. Hyperaesthesia is frequently found. Rigidity of the neck muscles with pain is often associated with throat hysteria. Preversion of taste and the sensation of foreign bodies in the throat, mutism, aphonia, and globus hysteria are among the symptoms found in this condition. It is well to exclude myositis tonsillitis, and other focal infections which may produce any or all of these symptoms. Foreign bodies must be carefully excluded in diagnosis. Dysphagia is sometimes associated with reverse peristalsis. Actual disease must be carefully eliminated before a positive expression of opinion is made. A well-studied diagnosis gives the physician a confidence which enables him to advise and instruct, give forceful suggestion, and successfully combat the morbid ideas which possess the victim of throat hysteria.

#### SINUS THROMBOSIS

Sinus thrombosis resulting from middle ear and mastoid disease may come about in one of several ways:

1. The inner table of the mastoid may become diseased and an abscess form between the sinus and the inner table followed by inflammation in the outer sinus wall which leads to a thrombus in the sinus.
2. The inner table may become diseased with an extension to the sinus wall without abscess formation. This also may result in sinus thrombosis.
3. A thrombosis may form in one of the smaller veins of the mastoid and extend to the lateral sinus. Thrombosis may be either partial or com-



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plete. Both forms are found in acute and chronic otitis.

There are several possible end results of lateral sinus thrombosis.

1. The patient may die of general sepsis.
2. The clot may break down and communicate with the perisinus abscess.
3. It may break through the visceral wall of the sinus and produce cerebral abscess and meningitis.
4. The clot may become organized and produce obliteration of the sinus.

In sinus thrombosis bacteria pass from thrombus into the general circulation. It is probable that there is a bacteremia in all cases of sinus thrombosis except those which are aseptic from the beginning. Bacteria free in the circulation may lodge in the pulmonary capillaries or may cause metastatic abscesses in any susceptible localities.

Dr. Steinfeld reported in detail an instance of sinus thrombosis following measles in a child five years of age, bringing out characteristic points in the diagnosis and progress of the case.

### Cleveland Academy

(Lester Taylor, Secretary)

A special meeting of the Academy of Medicine of Cleveland, was held October 8, at the Cleveland Medical Library Building. Due to the nature of the meeting, routine business was suspended, and Dr. Birge immediately introduced the guest of the evening, Dr. Harvey Cushing, Professor of Surgery at Harvard Medical School, who took as

the subject for his address, "The Special Field of Neurological Surgery."

Dr. Cushing prefaced his talk by a few general remarks about the relation of the medical situation in Cleveland to the same. He then traced something of the development of the specialties, using as an analogy the tree and its branches, and dwelling especially upon the growth of the comparatively new specialty of neurological surgery and his own part therein. He discussed and gave statistics dealing with tumors of the brain, especially of the pituitary body, and spoke of some of the recent advances of the study of the cerebro-spinal fluid and in the technic of brain surgery. He closed with a plea for a National Institute of Neurology which would combine departments under competent neurologists, psychiatric and neurological surgeons, with a well equipped neuro-psychiatric laboratory.

The Academy was fortunate in having this subject so entertainingly and concisely presented by the man who has really done most in development of the subject. On motion of Dr. W. E. Lower, the Academy expressed its gratitude to Dr. Cushing for his splendid address by a rising vote of thanks.

The largest attendance of recent years was recorded, there being 275 present.

The one hundred sixty-fourth regular meeting

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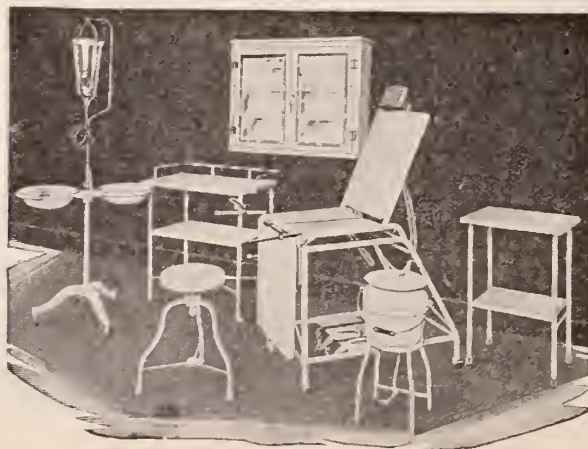
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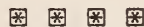
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of the Cleveland Academy was held October 22.

The program: "Fractures of the Skull," by Dr. M. E. Bland; "The Care of the Obstetric Patient," by Dr. A. J. Skeel, and "Version and Breech Extraction," by Dr. Theodore Miller.

The Experimental Medicine Section of the Cleveland Academy held its 103 regular meeting November 12.

The program: 1. "Studies in Blood Calcium," by Dr. C. W. Burhans; 2. "Observations on the Effect of Purified Digitalis," by Drs. R. W. Scott and T. Shen.

### Columbus Academy

(James A. Beer, Secretary)

"Active Moronitis," was the subject for consideration at the meeting of the Columbus Academy held at the Institution for Feeble-Minded, October 25. There was a clinical demonstration of the beneficial effect of fruit juices (principally M. malus) on C. pepopieitis, and a practical demonstration of the "Universal" Pulmotor.

Physicians from throughout the Tenth District and other nearby counties were guests of the Columbus Academy at its November 15 meeting. Dr. Walter W. Hamburger of Chicago, Ill., was the speaker of the evening, his subject being "Abdominal Types of Cardiac Disease and Electrocardiography in Their Diagnosis and Treatment."

The meeting Monday, November 8, held at the Franklin County Tuberculosis Sanitarium, was featured by addresses on "Tuberculosis of Kidney," by R. B. Drury, and "Complications of Pulmonary Tuberculosis," by C. H. Benson.

#### FIRST DISTRICT

Warren County Medical Society held its last meeting of the year at Lebanon, November 9. Essayists of the occasion were Drs. Kelley Hale and George M. Austin of Wilmington. The former presented an illustrated lecture on "Fractures," and the latter one on "The Biological Aspect of Blood Transfusion."—Herschel Fisher, Secretary.

#### SECOND DISTRICT

Darke County Medical Society was entertained, November 11, at an oyster supper in Greenville by four of its members as their bit toward doing something to further the interest of the society for the year 1920. The hosts were Drs. C. I. Stephen, Ansonia; H. A. Snorf, E. G. Husted and Wm. Matchette, Greenville. Following the feast officers were elected for the ensuing year as follows: President, E. A. Fisher, Yorkshire; vice-president, J. C. Mills, Greenville; secretary-treasurer, A. F. Sarver, Greenville, (re-elected). A spirit of good fellowship prevailed and many new ideas were brought forward and discussed relative to increasing interest and attendance at

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"Plaintiff's claim is for injuries caused by defendant, by reason of his unskillful and unworkmanlike services in pulling out plaintiff's tooth and in giving and administering gas to plaintiff. Plaintiff further states that the defendant gave him an overdose of gas and caused gas poisoning; that as a result thereof he was incapacitated from transacting his business duties, and expended monies for doctor's bills, all of which expense and damage was due to the defendant's incompetence and unskillfulness."

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the monthly meetings of the society for the coming year.—B. F. Metcalfe, Correspondent.

*Greene County Medical Society*, meeting in Xenia, November 4, had as its guest Dr. J. F. Baldwin of Columbus. Dr. Baldwin described two common types of cases—chronic uterine hyperplasia with its many disabling symptoms, and chronic hypoplastic dysmenorrhea—which, not responding to local and medical measures, are safely operated. In discussing the technique to be employed Dr. Baldwin emphasized the following points: value of ether as the anesthetic; Trendelenburg position *after* operation; speed and efficiency; preliminary vaginal antiseptics; the round ligament does not bleed when cut; leave no pelvic raw surface; closure without unnecessary drainage.

Meetings of the society during the past year have been enthusiastic and well attended. Seven new members have been added, three have removed and two have died. Twenty members paid their 1921 dues at the November meeting and Greene County hopes to be one of the first to enter the One Hundred Per Cent. Club.—Reyburn McClellan, Secretary.

*Montgomery County Medical Society's* program on November 5, consisted of an address on "Hare Lip and Cleft Palate Surgery," illustrated by motion pictures, by Dr. Claire L. Straith, of Detroit, Michigan.

#### THIRD DISTRICT

*Allen County Medical Society* met in regular session at Memorial Hall, Lima, October 19, with 28 members present. The paper for the evening was presented by Dr. Walter Noble, whose subject was "Tonsils." The matter was very ably handled, being interesting, practical and well-

balanced, and a good discussion by Drs. Herr, Baxter, Yingling and Noble followed.

Because of the election excitement attendance at the meeting of November 2, was reduced to 18. Dr. Herbert Thomas read a short paper on "X-ray," which was supplemented by plates showing the value of the X-ray in fractures, location of foreign bodies and pulmonary findings in tubercular cases. Discussion by Dr. McGriff.—A. S. Rudy, Correspondent.

*Seneca County Medical Society*, meeting in Tiffin October 21, elected the following officers for the coming year: Dr. J. A. Gosling, president; Dr. R. G. Steele, vice-president, and Dr. Edwards H. Porter, secretary-treasurer. Dr. Porter has established a splendid record during a number of previous terms as secretary-treasurer.

#### FOURTH DISTRICT

*Sandusky County Medical Society's* meeting of October 28, at the home of Dr. E. W. Baker, was attended by 17 members. A sumptuous dinner was served at seven o'clock, after which members repaired to the office rooms where midst an abundance of easy chairs and excellent smokes an attractive and valuable program was rendered. Dr. B. O. Kreilick presented a paper on "Focal Infections," which was replete with unique angles and was given the closest attention and followed by a lively general discussion. A resolution was adopted endorsing the stand of the local health department in encouraging the wholesale vaccination of school children and other unimmunized persons as a preventive for smallpox. This action was hastened on account of the prevalence of variola in our neighboring city, Tiffin. Business transactions of the evening included the enrollment of another of our local medics in the increasing number of our society enthusiasts. A

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vote of thanks was given Dr. and Mrs. Baker for the splendid reception accorded the society.—C. I. Kuntz, Secretary.

#### FIFTH DISTRICT

*Lake County Medical Society* met in joint session with *Ashtabula County Society* at Geneva on November 4. Supper was served to the 37 physicians present at the Broadway Inn at seven, and at eight the scientific meeting was called to order by Dr. W. H. Leet, president of the Ashtabula Society, and greetings were extended by Dr. W. P. Ellis, president of the Lake County Society. Guests of the evening were Drs. C. F. Hoover and F. E. Bunts, both of Cleveland.

In an address on "Cardiac Murmurs," Dr. Hoover stressed the importance of inspection and palpation in the diagnosis of murmurs, even more than auscultation. He said the murmur depended upon the velocity of the stream and the lumen of the vessel. Concluding his address Dr. Hoover spoke of the significance of murmurs, their location, and method of finding them.

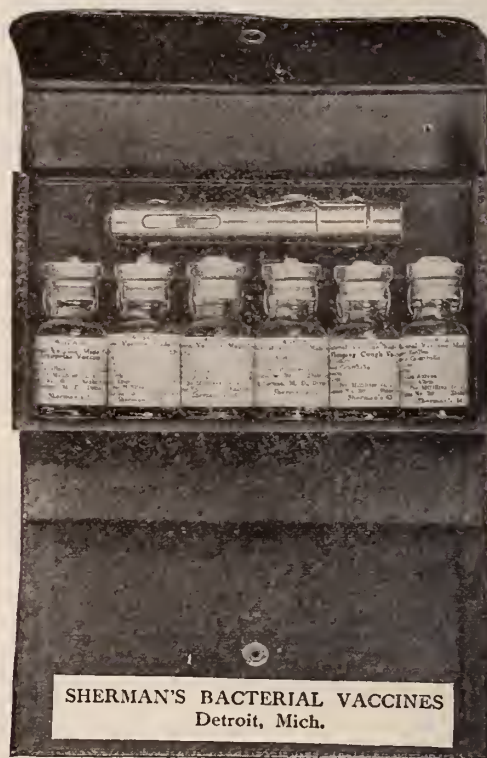
Speaking on "Emphyema," Dr. Bunts divided the varieties into: Class A, in which the fluid is clear and free from micro-organisms; Class B, having a turbid fluid with some bacilli; Class C, with yellow pus. He spoke of aspiration in Class A and rib-resection in Classes B and C. Post-operative treatment includes the introduction of solutions, as iodine, normal saline, Carrel-Dakin. Common complications are arthritis and emphysema. Deaths result from pyemia, abscesses forming in the lungs and liver—E. S. Jones, Secretary, Lake County.

#### EIGHTH DISTRICT

*Muskingum County Medical Society* held its regular monthly meeting in Zanesville, November 3. Dr. O. I. Dusthimer spoke on "Rheumatism"; Dr. G. Warburton on "Development and End Results in Obstetrics," and Dr. Cyril Dozer of Roseville, on "Treatment of Lobar Pneumonia."—Maurice Loebell, Secretary.

#### NINTH DISTRICT

*Gallia County Medical Society* has resumed its regular Thursday evening meetings and each meeting is being well attended. Last winter the symposium plan was started with anatomy, physiology and diseases of the chest and their treatment. The same plan will be followed during the coming winter, the last three Thursday evenings of November and the first two of December being devoted to the study of the kidney. In this symposium, "The Anatomy and Physiology of the Kidney," was discussed by Dr. G. G. Kineon; "Urine Analysis and Newer Ideas on Functional Tests," by Mr. Hall, pathologist at Holzer Hospital, and "Various Forms of Nephritis and Their Treatment," by Dr. Leo C. Bean. "Pyelitis and Its Treatment" and "Surgery of the Kidney" will be the topics presented by Drs. O. A. Vornholt and C. E. Holzer at the first two December meetings.—Milo Wilson, Secretary.



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Notable in the annals of the University of Cincinnati was the centenary celebration of the College of Medicine of that institution on November 6. The exercises, attended by many educational leaders in this country and abroad, marked the climax of a century's work in medical education and science in Cincinnati, where in 1820 the Ohio-Miami College was founded by Dr. Daniel Drake in one room with a faculty of four members. The medical department now occupies one of the largest groups of buildings of Cincinnati University and has a faculty of 166 professors and instructors.

The centennial celebration started on the morning of November 6, with an academic procession in charge of Dr. A. C. Bachmeyer and Dr. Carey P. McCord, headed by the members of the medical faculty who were followed in succession by the members of the other university faculties, the visiting delegates, the board of directors, and the recipients of honorary degrees. Following these, came the speakers and clergy, the acting dean of the Medical College, the president of the Board of Directors, and the president of the University. The procession started from the Administration Building of the General Hospital, passed over Burnet avenue to Eden avenue and thence to the

auditorium of the Medical College. The entrance to the Medical College was guarded by a line of medical students on either side, with the Senior Class at its head.

After invocation Hon. Judge Rufus B. Smith welcomed the guests, and Dr. J. C. Oliver gave an historical sketch of the college. Dr. William T. Sedgewick from the Massachusetts Institute of Technology, spoke on the relationship of medicine to public health. Dr. Joseph Ransohoff reviewed the work of Drake and Holmes and other famous teachers in the Medical College.

Following benediction pronounced by Right Rev. Boyd Vincent, Dr. Frederick Charles Hicks, president of the University, conferred honorary degrees upon a number of persons chosen by the university board, including James Rowland Angell, A. M., Litt. D., President Carnegie Foundation; Mary Muhlenberg Emery; Sir Auckland Geddes, British Ambassador; Ludwig Hecktoen, M. D., Sc. D., Professor of Pathology, University of Chicago; the late Christian R. Holmes, M. D., Frederick S. Novy, Sc., D., M. D., Director Hygienic Laboratory and Professor Bacteriology, University of Michigan; John Barton Payne, Secretary of the Interior; Joseph Ransohoff, M. D., F. R. C. S. (London), Professor Surgery, U. C.;

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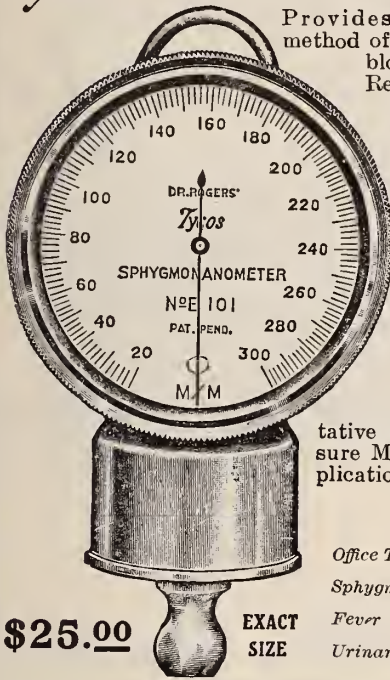


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Luncheon was served to the visitors in the college lunch room, on which occasion the medical students were the guests of the faculty. The afternoon was spent by most of the delegates visiting points of interest about the city, automobiles being placed at their disposal by the faculty.

The celebration was brought to a fitting close by a dinner held at the Hotel Sinton. The decorations were arranged in perfect taste and the tables were set for parties of ten and twenty. This grouping added greatly to the good fellowship as it allowed of greater intimacy and permitted out-of-town guests to be more closely associated with their friends.

President Frederick C. Hicks was the toastmaster. Those at the speaker's table were Sir Auckland Geddes and his secretary, H. V. Tenant; John Barton Payne, Secretary of the Interior; John Galvin, the Mayor; Dr. Joseph Ransohoff, Professor of Surgery in the Medical College; Dr. James R. Angell, President of the Carnegie Foundation; Dr. Charles R. Stockard, Professor of Anatomy, Cornell University; Dr. Lewis Schwab, the former mayor; Rev. George A. Thayer; Dr. J. C. Oliver, acting dean of the Medical College; Frank McVey, R. M. Hughes, Leo Mielziner, who painted the portrait of Christian R. Holmes unveiled at the close of the morning celebration, and Clement J. Barnhorn, who designed the bronze tablets of Drake and Holmes in the hall of the Administration Building of the General Hospital.

The principal address of the evening was that of the British Ambassador. Sir Auckland discussed the present educational system and pointed out that culture is not essentially dependent upon the knowledge acquired from books or the ease with which examinations are passed, but upon the ability to understand life and the world as it is. He pointed out that a very large number of great men had no education such as we know it today, citing as examples Daniel Drake, George Washington, Abraham Lincoln and Admiral Nelson; education, as carried out at the

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present time, hardly produces such men as these. Universities must not be isolated from the world about; such a condition is little likely to occur in a municipal institution such as the University of Cincinnati.

"There must be something in our educational system that takes the vigor and force from our students," said Sir Auckland. "I was educated in Edinburg University, which is a municipal institution similar to the University of Cincinnati. The University of Edinburg has existed for more than 350 years and is considered one of the highest types of colleges in the world.

"Too many universities take the men and women away from the things and affairs of the world, and thus make cramped men and women out of them. After all, the university education is not to get knowledge from books or pass examinations, or just to fit one to make a living, but rather to fit the student to know the world and to understand life. The real function of the university is to teach students how to live the life of their day.

"As to the trouble at the present time, too many students enter a university and then do not see life until after graduation. Then they are out of touch with the real conditions that confront them.

"The university must not withdraw itself, but must bring students into contact with life as it is. In the municipal university, you have the solution of this problem, which does not exist in America alone, but throughout the world of education."

The other speakers were: Hon. John Galvin, mayor of Cincinnati; Hon. John Barton Payne, Secretary of the Interior; Dr. James R. Angell, President of the Carnegie Foundation; Dr. Chas. R. Stockard, Professor of Anatomy, Cornell University, and Dr. Louis Schwab, representative of the Alumni.

Among those who were honored at the centenary was Mrs. Mary M. Emery of Boston, who has made the Medical College several splendid gifts and only recently gave \$250,000 to establish a chair of pediatrics. Announcement has been made that the new department will be headed by Dr. Kneneth D. Blackfan of Johns Hopkins University.

One of the principal features of the celebration was the unveiling of a life-sized painting of Dr. Christian R. Holmes, late dean of the college, in the Holmes' Memorial Library. Dr. Holmes' will left an endowment fund for the publication of a medical journal by the college, and it was particularly fitting that the first issue of this bulletin should be presented in connection with the centenary. The first number of the University of Cincinnati Medical Bulletin, as it is called, contains six excellent historical articles, including a history of medical organization in the city, by Dr. A. G. Drury, secretary of the local academy.

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## Announcement of Merging of Victor Electric Corporation with X-Ray Interests of General Electric Company

An arrangement has been completed which took effect October 1, 1920, under which the entire business of the Victor Electric Corporation and X-Ray interests of the General Electric Company have been merged in a new corporation formed for the purpose and known as the VICTOR X-RAY CORPORATION. The new company has exchanged its capital stock for the X-Ray patents and good will of General Electric Company and for the assets and business of the old Victor Electric Corporation.

The formation of the new company will result in full manufacturing, engineering and research co-operation between Victor X-Ray Corporation and General Electric Company with respect to X-Ray problems. It will extend further the usefulness of the two companies and consequently, present needs for Coolidge tubes and other X-Ray devices will be adequately met.

The executive, administrative, engineering and sales staff of the old Victor Electric Corporation will remain practically unchanged. Mr. C. F. Samms becomes President and General Manager. Mr. J. B. Wantz retains full charge of manufacturing and designing. It is contemplated to bring about a complete co-ordination of the entire Victor Corporation organization with the research and engineering organization of General Electric Company with as little disturbance of the old relationships as possible.

Dr. W. D. Coolidge of the research laboratory of General Electric Company becomes Consulting Engineer of the Victor X-Ray Corporation. Mr. C. C. Darnell of the research laboratory of General Electric Company becomes the Commercial Engineer of the Victor X-Ray Corporation. Mr. W. S. Kendrick, who for many years had charge of the commercial sale of the Coolidge tube, will be General Sales Manager. Mr. L. B. Miller remains General Manager of Agency Sales.

The Victor X-Ray Corporation will continue to carry out the same liberal policies and practices toward the X-Ray trade that have already been established by the General Electric Company.

The primary purpose of this merger was to co-ordinate the efforts of the best and most constructive elements in the research, engineering and commercial divisions of the X-Ray field to the end that users of X-Ray equipment might be served in the best possible manner, and assurances are given by the officers of the new corporation that the ideal toward which they intend to strive is 100% service.

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### Present Status of Work for the Crippled of Ohio

It will be of particular interest to the medical fraternity of Ohio to know that definite arrangements have been made to commence the rehabilitation of the crippled and handicapped persons of this state.

Recommendations for a comprehensive program to include crippled children and industrial cripples are being considered. Fundamental policies and primary considerations were agreed upon at a meeting in Columbus on November 14 under the chairmanship of Dr. Albert H. Freiberg of Cincinnati, and attended by representatives of the Ohio Institute for Public Efficiency, State Department of Health, State Department of Instruction; State Industrial Commission, Ohio Society for Cripples, Board of State Charities, and the Ohio State Medical Association.

Pursuant to a major provision of the Fess-Kenyon Bill, which provides federal aid for states engaging in the rehabilitation of cripples, an agreement has been entered into between the State Board of Education and the Industrial Commission of Ohio. This agreement now makes it possible for Ohio to secure federal funds to the extent of \$39,000 for the fiscal year ending June 30, 1921, as soon as the state provides an equal amount. (For a period of three years thereafter Ohio's share will be \$50,000 annually.) While it may not be possible to secure \$39,000 or even a part thereof before the meeting of the next legislature, some important preliminary steps are nevertheless being taken.

One important step is to interest those whose cooperation is essential for the success of the work. To this end cooperation is planned between representatives of the State Department of Health, the State Board of Charities, the State Board of Education, the Industrial Commission of Ohio, and various other bodies that will be directly interested in the furtherance of this work. Provisions of a proposed Ohio Rehabilitation Act are being considered.

The importance of the physician and surgeon in this program is great, for disease is the principal cause of crippling. Add to the cases of cripples caused by disease those who are congenitally crippled, and over fifty per cent. of all cripples are accounted for. Time and again it has been demonstrated that with proper care the majority of these cases can be greatly helped, in many cases cured. Until the present time financial considerations have prevented many of those who might have been helped from securing attention. This condition may be largely remedied if the proposed legislation is enacted.

#### Medical Comments, Abstracts

Because of limited space it was necessary to omit the department of Medical Comments, Abstracts and Current Topics of Interest in this issue. The discussion of "Lipoid Dressings in the Treatment of Wounds and Control of Infections," started in November, will be continued in the February, 1921, number.

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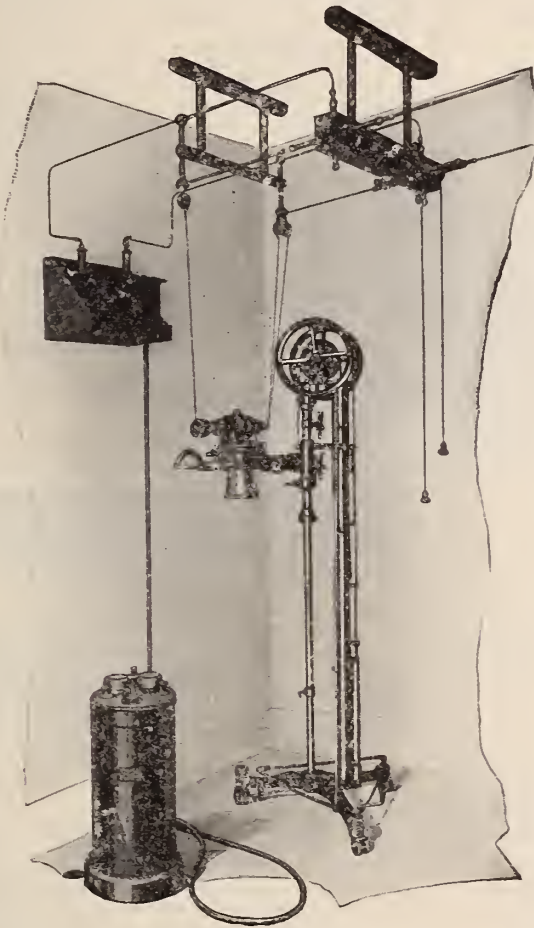
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## NEWS NOTES OF OHIO

*Cincinnati*—Dr. Martin H. Fischer, professor of physiology at the University of Cincinnati, will deliver a course of lectures during January and February in Amsterdam, Holland. The lectures will cover certain phases of physiology and colloid chemistry. During Dr. Fischer's absence his department at the University will be in charge of Dr. Edmund M. Baehr, associate professor.

*Toronto*—Dr. E. H. Rea, a former resident of Irondale, has entered practice here.

*Sidney*—Dr. Arthur Silver is convalescing from an operation for appendicitis which he underwent at Christ Hospital, Cincinnati, in October.

*Cleveland*—Dr. C. W. Engler has become associated with Dr. Secord H. Large, with offices in the Rose Building, limiting his practice to diseases of the eye, ear, nose and throat.

*Lima*—Dr. Frank Morris has moved to this city from Columbus Grove.

*Canton*—Dr. O. R. Clovis has been appointed city school physician by the local board of education on a full time basis at \$3,000 per year. Dr. Clovis succeeds Dr. E. O. Peterson, resigned.

*Madison*—Dr. E. M. Cowles is spending the winter in Sawtelle, California.

*Springfield*—Dr. John W. Parker, for 20 years a resident of London and recently of Akron, has assumed his duties as director of the new medical department of the Robbins & Myers Company, this city.

*Bluffton*—Dr. John J. Sutter of this city, has moved to Lima, where he has established an office as health commissioner for the Allen County General Health District in the Memorial Building.

*Cincinnati*—Dr. C. Knight of the United States Public Health Service, addressed the Woman's City Club, November 5, on "Malnutrition of School Children, Its Causes, Effects and Methods of Correction."

*Fremont*—Dr. C. R. Pontius, president of the Sandusky County Medical Society, has returned from a vacation in Florida.

*Cleveland*—Professor J. Bordet of the University of Brussels, director of the Pasteur Institute of Brussels, delivered a lecture on "Anaphylaxis" at the Cleveland Medical Library, November 8, under the auspices of the H. M. Hanna Lecture Fund.

*Gallipolis*—Dr. O. A. Vornholt has moved to this city from Chicago.

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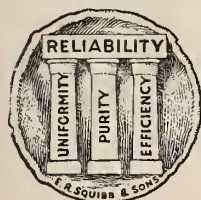
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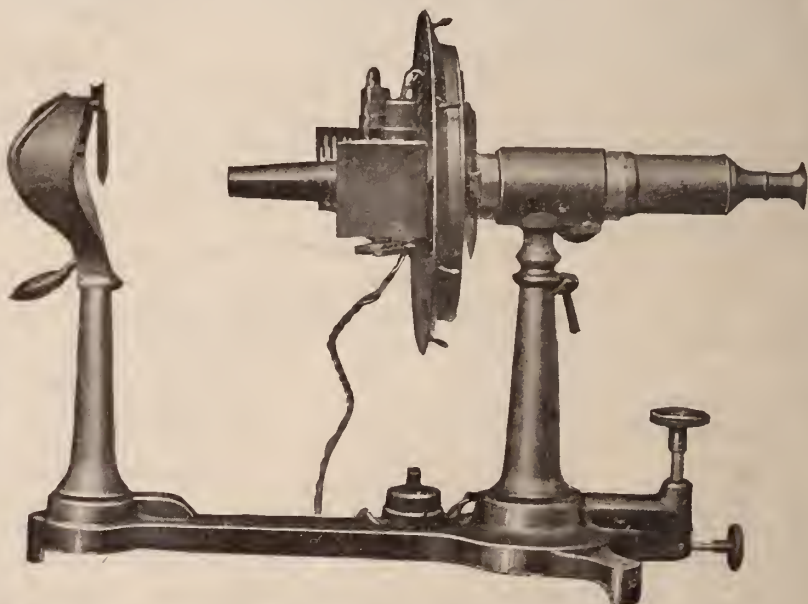
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FEB. 1, 1920 VOL. XVI  
No. : : 2



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
mailing at special rate of postage provided  
for in Section 1103, Act of Oct. 3, 1917,  
Authorized July 10, 1918.

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Next Meeting of State Association, Toledo, June 1, 2, 3, 1920

# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY THE  
OHIO STATE MEDICAL ASSOCIATION UNDER THE  
DIRECTION OF THE PUBLICATION COMMITTEE

MARCH 1, 1920

VOL. XVI  
No. : : 3



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
mailing at special rate of postage provided  
for in Section 1103, Act of Oct. 3, 1917,  
Authorized July 10, 1918.

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OWNED AND PUBLISHED MONTHLY BY THE  
OHIO STATE MEDICAL ASSOCIATION UNDER THE  
DIRECTION OF THE PUBLICATION COMMITTEE

APRIL 1, 1920

VOL. XVI  
No. 3 : 4



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
mailing at special rate of postage provided  
for in Section 1103, Act of Oct. 3, 1917,  
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OWNED AND PUBLISHED MONTHLY BY THE  
OHIO STATE MEDICAL ASSOCIATION UNDER THE  
DIRECTION OF THE PUBLICATION COMMITTEE

MAY 1, 1920

VOL. XVI  
No. : : 5



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
mailing at special rate of postage provided  
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OWNED AND PUBLISHED MONTHLY BY THE  
OHIO STATE MEDICAL ASSOCIATION UNDER THE  
DIRECTION OF THE PUBLICATION COMMITTEE

JUNE 1, 1920

VOL. XVI  
No. : : 6



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879; Acceptance for  
mailing at special rate of postage provided  
for in Section 1103, Act of Oct. 3, 1917,  
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VOL. XVI  
No. : : 7



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Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
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# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY THE  
OHIO STATE MEDICAL ASSOCIATION UNDER THE  
DIRECTION OF THE PUBLICATION COMMITTEE

AUGUST 1, 1920 VOL. XVI  
No. : : 8



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
mailing at special rate of postage provided  
for in Section 1103, Act of Oct. 3, 1917.  
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DIRECTION OF THE PUBLICATION COMMITTEE

SEPT. 1, 1920

VOL. XVI  
No. 1 : 9



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
mailing at special rate of postage provided  
for in Section 1103, Act of Oct. 3, 1917.  
Authorized July 10, 1918.

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OWNED AND PUBLISHED MONTHLY BY THE  
OHIO STATE MEDICAL ASSOCIATION UNDER THE  
DIRECTION OF THE PUBLICATION COMMITTEE

OCT. 1, 1920

VOL. XVI  
No. 1 : 10



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
mailing at special rate of postage provided  
for in Section 1103, Act of Oct. 3, 1917.  
Authorized July 10, 1918.

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OHIO STATE MEDICAL ASSOCIATION UNDER THE  
DIRECTION OF THE PUBLICATION COMMITTEE

NOV. 1, 1920

VOL. XVI  
No. : : 11



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
mailing at special rate of postage provided  
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# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY THE  
OHIO STATE MEDICAL ASSOCIATION UNDER THE  
DIRECTION OF THE PUBLICATION COMMITTEE

DEC. 1, 1920

VOL. XVI  
No. 1 : 12



Entered as second class matter July 5, 1905, at the  
Postoffice at Columbus, Ohio, under act of  
Congress of March 3, 1879: Acceptance for  
mailing at special rate of postage provided  
for in Section 1103, Act of Oct. 3, 1917.  
Authorized July 10, 1918.

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